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Original Articles.

ACNE.

By WILLIAM F. WAUGH, M.D.

ACNE is one of the most common of cutaneous affections, and one of the most obstinate.

Occurring about the time when puberty becomes established, it disfigures the faces of its victims for years; sometimes leaving its traces for life.

The affection may be considered as evidence of the acceleration of the vital processes that takes place at puberty. The sebaceous glands of the skin are stimulated, and an increase in their secretion is the result. From this results comedo, and if no means be employed to rid the skin of the sebaceous plugs, irritation is the consequence. This may be passive, resulting in the formation of indolent nodules, hyperplasia of the connective tissue ensuing, or there may be more active inflammation with the formation of pus. Errors in diet and in the management of the newly-acquired sexual powers, and hygienic sins in general, assist in causing or aggravating the attacks. Rohé describes a form that comes on about the beginning of the menstrual period, and often disappears at its close. In fact, all varieties of acne are apt to be aggravated during menstruation. Pregnancy is also occasionally accompanied by acne.

Workmen in petroleum products and in tar are sometimes affected with acne.

There is some connection between acne and the nervous system, though in what it consists I am unable to state. A full dose of ergot, sufficient to contract the capillaries, will cause the nodules to disap-

pear completely, but upon the discontinuance of the ergot, the eruption reappears.

A young girl had suffered for years with acne, on the face, and a large patch of nodules, with numerous comedones, upon the back. She had also some menstrual irregularity, but, being a virgin, she was not put upon local treatment, or subjected to an examination. After being treated for some time for the acne, with some benefit, epilepsy supervened, and has continued for two years. As the spasms appeared, the acne improved greatly. At present, the fits are almost entirely prevented by bromides, but the acne has reappeared in a severe form.

The treatment of acne is even more varied than that of pruritus. Few writers agree upon any remedy, or even any general plan. Rohé recommends but little internal medication. Laxatives, if needed, tincture of iron for great congestion or pus-formation, cod-liver oil for strumous cases, acetate of potassium, arsenic in "menstrual acne," and the use of fatty foods comprise his suggestions. He considers the local treatment by far the most important. The indications are to remove the sebum and the products of inflammation, and to restore normal function. Press out the plugs with a watch-key and apply the *spiritus saponis kalinus*, to be left on all night. For severer cases paint with a mixture of sulphur and carbonate of potash. Incision or puncture gives great relief and hastens involution. Bleeding should be promoted by hot douches. This is useful if pus-formation be free. For indurated acne freely scarify the tubercles, and apply mercurial ointment or strong carbolic acid tincture (1 to 3 or 4) every two or three days.

Da Costa gave the following prescription for a case of acne:

- R.—Acid nitro hydrochlorici dil..... f̄ss.
 Syrupi f̄ss.
 Aquæ aurantii flor..... q. s. ad f̄iv.
 M.—S. 3ij thrice daily.
- R.—Syr. hypophosphitum comp..... f̄iv.
 S. f̄3ij thrice daily.

Erasmus Wilson recommended that the exciting cause should first be sought and removed. The general health and the nutrition of the skin should be improved; diet, exercise, and other points in personal hygiene, should be carefully regulated. Tonics are indicated; especially Fowler's solution $\mathfrak{m}\text{ij}$, ter in die, after meals, with wine of iron. An objection to giving arsenic after meals is that it is apt to be lost in the contents of the stomach and voided; especially if iron be present, with which it forms an insoluble precipitate. When the two drugs are to be given together it is best to use the chloride of arsenic and tincture of iron.

Locally:

- R.—Sulphuris hypochlorid..... 3ij.
 Potassii carb..... gr. x.
 Adipis benzoat..... 3j. M.

Constipation is frequently an exciting cause, and for this saline laxatives, preferably in the form of mineral waters, are chosen. Sulphurous waters are vastly superior in this affection. If the exciting cause be a disturbance of the uterine functions, this must be corrected. Aloetic purgatives and warm hip baths are indicated when the eruption occurs in females at the age of puberty. Digestive difficulties must be met by appropriate measures. A simple, unstimulating, but nutritious diet is to be recommended. In plethoric cases some restrictions are necessary. A large proportion of cases will be found to depend upon a depraved condition of the blood, which will be materially benefited by the building-up remedies—tonics, cod-liver oil, iron, etc. It will be seen that the general treatment must be determined by the indications in each particular case.—[C. H. Taylor.]

Niemeyer repudiates the use of internal remedies, and praises local medication. He recommends lotions of potash, hydrarg. bichlorid., or benzoin. He quotes Veiel's treatment approvingly; consisting in vigorous brushing with soft soap and a nail brush. Even if this should not succeed by itself, many authorities recommend its use previous to the application of ointments. Thus, Hebra recommends vigorous scrubbing, followed by the application of a paste made by mixing precipitated sulphur with equal parts of alcohol, carbonate of soda, laurel water and glycerine. Nearly all authors recommend the application to be left on over night. A popular formula in Germany is as follows:

- R.—Sulphuris precip..... 3ij.
 Camphoræ gr. x.
 Acaciæ pulv..... gr. xx.
 Aquæ calcis,
 Aquæ rosæ āā f̄3ij.
 M.—S. Shake well. Apply at bed time, and next morning rub off without wetting.

The treatment pursued by Balmanno Squire differs with the varieties of the disease. In acne simplex, with deep red areolæ, he recommends low diet, salines, and vapor baths, with weak alcoholic lotions. When inflammation has subsided, he uses weak solutions of bichloride of mercury, gr. j ad 3j. Amenorrhœa coinciding must receive appropriate treatment. In acne indurata, he uses sulphur ointment. When the pustules are large, with livid areolæ, the biniodide of mercury (gr. v—xxx ad 3j) is preferable.

This should be used until the skin becomes tender, when it is to be suspended for a few days. Chrysophanic acid 3ij to 3j, is also recommended.

When the skin is much indurated, the biniodide of mercury is the best local remedy. The tubercles which show signs of suppurating should be freely lanced. Cologne is a useful lotion in acne punctata, after the contents have been evacuated. Stronger local stimulants are needful when the follicles gape widely open; such as croton oil, diluted with olive oil.

Acne oleosa demands the free use of soft soap, followed by astringents. Shoemaker treats obstinate forms by puncturing with a needle knife, and applying oleate of zinc or of bismuth, until irritation has subsided. When astringents are indicated he uses a weak ointment of oleate of iron.

Piffard suggests that arsenious acid (gr. 1-20, t. i. d. in pill, before meals) is best suited to cases where the papules are indolent, not painful, slow in course and not tending to suppuration. Sulphide of calcium is the remedy in acute, sensitive, rapidly suppurating cases. The dose of the latter drug is 1 grain daily, in divided doses. Bromide of arsenic (gr. 1-240 to 1-60) occupies a middle ground between these two. The duration of the pustules is lessened by puncturing each, as soon as it appears. In acne indurata, when subacute, with large tubercles and much infiltration of the surrounding skin, mercury, phosphorus or the iodides will prove useful additions to the above. Soft soap, applied nightly, until the patient refuses to bear it any longer, will reduce the infiltration.

Van Harlingen lays stress upon the regulation of the general health, and uses iron, arsenic or mercury internally, as may be indicated. The White Sulphur waters have some reputation, probably due to the pure air and surroundings. Sea air often aggravates acne.

For acne due to gastro-intestinal disorder:

- R.—Tinct. ignatiæ..... gtt. lxxx.
 Tinct. coptis..... q. s. ad 3iv.
 M.—S. Two teaspoonsful in water, half an hour before meals.

—Shoemaker.

Shoemaker disapproves of the soap treatment, and recommends less energetic stimulants for the American skin.

Ellinger has recommended frictions of the skin with fine sand.

Further evidences as to the dependence of acne on local disorders is furnished by Seiler, who found the cutaneous affection disappear, when an accompanying rhinitis was cured.

Campbell bathes the affected area for ten minutes with water as hot as can be borne, applies a ten per cent. cocaine solution, and applies the lancet to each spot; gentle pressure with a hot sponge removing the pus. A few hours later each spot is painted with blistering liquid and cold cream applied.

He also employs a lotion and an ointment:

- R.—Pinol..... 3ijj.
 Tinct. lavandulæ..... 3iv.
 Glycerini 3j.
 Ext. hamamelidis..... 3ij
 Aquæ..... q. s. ad 3vi. M.
- R.—Sulphuris iodidi..... 3ss to 3j.
 Adipis benzoat.,
 Lanolin..... āā 3iv.
 M.—Et fiat unguentum.

Hardaway speaks highly of Vlemminckx's solution for acne indurata:

R.—Calcis..... ʒss.
Sulphuris sublimati..... ʒij.
Aquæ..... ʒx.
M.—Boil down to six ounces and filter.

First get rid of comedones by the soap inunctions, then begin by applying the solution diluted with five parts of water; increase the strength every four days until the full strength is used, if possible. The remedy is, at first, applied simply, more force being gradually applied by rubbing in. Cold cream may be applied to allay irritation.

Una recommends ichthyol:

R.—Ammonii sulphoichthyolat.
Aquæ dest.
Glycerinæ.
Dextrini, āā part æq.

M.—S. Apply over night; followed by a sublimate solution 1 to 400, in water, gum, glycerine and zinc oxide.

Lassar recommends the following paste in all forms of acne:

R.—Naphthol, beta..... gr. xxxv.
Sulphuris precip..... ʒij.
Petrolati,
Saponis virid..... āā ʒiss.

M.—S. Spread thinly over skin for twenty minutes; wipe off, and powder with talc.

Gaileton recommends the iodochloride of mercury, 1 part to 10 of axunge, as very energetic. It is to be rubbed in vigorously.

Louis Lewis reports excellent results from the sulphide of arsenic.

Wood speaks of cajeput oil as a useful stimulant in rosacea.

The fact that this annoying affection occurs so frequently at the age of puberty, should lead us in all cases to investigate the condition of the sexual organs. If any undue sensitiveness exist in the urethra, a metallic sound should be passed every other day, and allowed to remain some minutes. In females, hot vaginal douches, with cold douches to the spine every morning, will frequently prove effective. Such measures will not preclude the use of such remedies as are prescribed by the dermatologists, and will often cure without the aid of the latter.

Summary.—1. Correct any derangement of the general health which a thorough examination may disclose.

2. Regulate the general and personal hygiene.

3. The vigorous application of soft soap is indicated in all cases except the rare acute form; but especially for infiltration.

4. Nearly all authors recommend sulphur ointments for ordinary cases; mercurials for severe ones.

5. Except when clearly indicated, internal remedies are rarely of use.

6. The disease is singularly obstinate; hence, changes in the treatment adopted after mature reflection, should not be made except for cause.

Ergot will cause the indurations to disappear quickly; but they will return when the drug is discontinued.

The prolonged use of strychnine and nitro-muriatic acid sometimes effects a cure.

R.—Strychninæ sulphat..... gr. j.
Acidi nitro-muriatici..... ʒij.
Aquæ dest..... q. s. ad ʒv.

M.—S. A teaspoonful in water before each meal.

ANODAL AND CATHODAL DIFFUSION; OR, THE INTRODUCTION OF MEDICINAL SUBSTANCES INTO THE HUMAN BODY, THROUGH THE SKIN BY MEANS OF THE GALVANIC CURRENT.¹

By W. H. WALLING, M.D.

IN studying this intensely interesting subject, let us first glance at the tissues and cells of the body, and the effects of the electrical current upon them. I have condensed from Yeo the following classification of the tissues of the adult, there being four groups:

1. Epithelial tissues. The primitive surface tissues of the outer and inner germ layers, which are variously modified for several distinct duties.

2. Nerve tissues, springing from the former, are modified for receiving, conducting, controlling and distributing impressions.

3. Muscles, or contractile tissues are close relation to both the previous groups.

4. Connective tissues. The materials used in the general body architecture. Bone and cartilage, modifications of connective tissue, we need not consider. The blood-vessels are chiefly made up of connective tissue, and even the blood itself may be considered as an outcome of this fourth group, since the cells of the blood are first formed in the mesoblast, and later from the connective tissue corpuscles.

The various secreting organs are made up of epithelial cells, held together by connective tissue, and in close relation to blood-vessels and nerves, and so arranged that they pour their secretion into a duct.

All these tissues have their origin in the primitive material, which we term protoplasm. This protoplasm has certain movements which characterizes its life, and these movements are affected by mechanical, chemical and electrical strength, differing in character; that by slight excitation by the induced or faradic current, increasing the rapidity of the movements, stronger ones causing tetanic contractions, and numerous and powerful ones causing coagulation. In this connection I enter my protest against the use of strong faradic currents, given by the street fakir, or the so-called electrical testing machines, which are now found in public places. Such experiments are dangerous and should be prohibited by law.

The galvanic current causes dilatation and contraction of the blood-vessels, by direct stimulation of their muscular fibers, acting in like manner upon the lymphatics, causing more ready circulation of the blood and nutritive fluids; increased power of imbibition of the tissues, increased osmotic processes; changes in the disassimilation and nutrition of the nerves on account of their stimulation or sedation; changes in the molecular arrangement of the tissues, caused by electrolytic processes, and finally, the consequences of the mechanical transport of fluids from one pole to the other (Erb).

The current also exerts a more or less direct influence upon the trophic centers in the anterior cornea of the spinal cord.

Very powerful currents, by the shock method, we need not consider, further than to state that their effects upon the blood of man were carefully studied by Dr. Fell, of Buffalo, N. Y., in connection with the Kemmler execution, showing the immediate disin-

¹ Read before the Alumni Association of the Medico-Chirurgical College, March 20, 1891.

I have more than once failed to benefit a patient until he abstained from malt liquors.

tegration of the red blood corpuscles, under the heavy currents used.

The inter-polar effects of the galvanic current have been studied from two points. Dr. Inglis Parsons and others, acting upon fibroid tumors and other animal tissue, after removal from the body, detected no change in the inter-polar region. Dr. Buckmaster, of this country, however, clearly proved that there was absolute disintegration of the living cells, by the inter-polar action of a very strong current. He experimented upon the living heart of an anæsthetized dog, showing clearly the difference in result, when acting upon the dead or the living cell, a strong argument in favor of proper vivisection.

That these changes in the vital processes, and the consequent good results obtained by the use of electricity alone, are greatly increased by the judicious combination and application of the current, and certain drugs and chemicals, I present for your consideration. This process I have styled anodal and cathodal diffusion. It is also spoken of as the cataphoric effect of the galvanic current.

This subject was first studied by Dr. B. W. Richardson, of England, some thirty years ago, but his statements that he had produced local anæsthesia by the use of aconitia, morphine and chloroform with the electric current, "aroused such a storm of opposition in Europe, that he abandoned what was an actual discovery."

H. Munk, Adamkiewicz, Pashkis, Lombroso, Erhman, Bartner, Matteini and others in Europe, within the last ten years, have experimented with different substances by cataphoresis. Munk killed rabbits by placing a solution of strychnine upon the anode and applying it to the skin of the animal for a few minutes, with a moderate current.

In this country, Drs. Peterson, Blackwood, Corning, Reynolds, Woodbury, Shoemaker, Bayles and others, have done more or less work in the direction of anodal diffusion.

Adamkiewicz introduced his so-called diffusion electrode in 1886, and wrote upon the effect of chloroform as used with the anode. His conclusions, however, were not received with favor, as it was claimed that the mere contact of chloroform with the skin was sufficient to produce anæsthesia, and further, that the resistance of chloroform being so great, any increased effect by electricity was impossible. Lombroso and Matteini employed chloroform during the same year, for the relief of neuralgia, applying it by means of ordinary electrodes, and with good effect.

My own experiments and uses of chloroform with the anode convinces me that its specific effect is greatly enhanced by using it with the galvanic current, notwithstanding the great resistance offered by that liquid. Each of the investigators and experimentors named, so far as I can learn, used only the anode, or positive pole of the battery, in electrical diffusion.

The chemicals mostly employed have been strychnine, morphine, quinine, aconitine, helleborine, strophanthine, cocaine, the bichloride of mercury, the iodides of potassium and sodium, the citrate, benzoate and chloride of lithium. Iodol, the tincture of iodine, menthol and carbolic acid are mentioned.

METHOD OF APPLICATION.

Whilst any electrode may be used with some of the substances named, exact dosage could not be maintained, and this has been one grave objection to such use, but this has given place to better instruments

and better methods. By means of these discs of blotting or other paper, an exact quantity of any drug in solution may be administered by anodal or cathodal diffusion. The discs I show you were made by Otto Boeddiker, Ph. G., of 954 Sixth avenue, New York, and contain respectively, aconitia $\frac{1}{4}$ gr., cocaine hydro-chlo. $\frac{3}{4}$ gr., strophanthine $\frac{1}{8}$ gr., helleborine $\frac{1}{8}$ gr., strychninæ nitratis $\frac{1}{8}$ gr., hydrarg. bichloride $\frac{1}{4}$ gr., iodide of potassium 2 gr. and menthol 1 gr. These heavier discs of blotting paper I also use, the medicament being dropped upon them at the time of using from an ordinary dropper, or from a vial of this pattern, the strength of the solution being graduated to the size of the drop.

Some electrodes are made of tin or other metal, but I prefer carbon, one of which I now show you. The disc is first shaped so as to receive this rim of hard or soft rubber, which insulates it as well as prevents loss by evaporation. After shaping it the carbon is immersed in a bath of melted paraffine until it is fully saturated, which will be shown by the cessation of air bubbles from the carbon. The object of this process is that the porous carbon, being saturated with the paraffine, it is rendered impervious to the various solutions to be used with it. (I treat all of my carbons in this manner, and after using, they may, if necessary, be passed through the flame of an alcohol lamp, thus rendering them thoroughly aseptic.)

The rim is now placed upon the carbon, a suitable attachment made and the diffusion electrode is ready for use. First a piece of absorbent cotton dipped in water, may be placed in the instrument, and upon this the medicated disc, or a plain or neutral disc may be used in place of the cotton. Wetting now the prepared disc in a suitable menstruum, the electrode is applied to the skin, and the current turned on.

In some cases, when a joint or more or less of the whole limb is to be treated, this metal bandage of pure tinfoil may be used. This I prepare as follows: Taking a muslin bandage, of suitable length and width, I fold over it lengthwise a strip of tinfoil, and have the two firmly stitched together. The object of the muslin is to give it tensile strength. This bandage is very useful in many applications of electricity other than the methods under consideration. In using it a piece of blotting paper or other suitable substance may be applied, wet to the desirable extent in the medicament to be used, and applied to the part; over this another bandage, also wet in water, and over all, this foil bandage to which the pole of the battery is attached. This method I sometimes use in applying the lithium salts to gouty joints. I also place the joints in a strong solution of the salt and apply the current through the solution. The skin may be prepared by washing with ether, but I seldom find this to be necessary.

The current strength to be used is determined largely by the sensation produced. I am in the habit of using from five to fifteen ma., with sittings lasting from three to ten minutes, or possibly longer. With aconitia, cocaine, morphine and chloroform upon the anode, I have produced deep local anæsthesia, lasting from two to ten hours, or longer. The indication for the use of the drugs just named are in neuralgias, sciatica, the pains of myalgia, or other superficial pains, the production of anæsthesia of the gums in certain dental operations, of the skin for paracentesis or other minor operations. The method is preferable to hypodermic injection on account of its gentleness of application; there being no shock, constitutional disturbance is rare, although I have had cases where morphine, while it produced a short-

lived analgesia, aggravated the symptoms subsequently. That this was due to the morphine was proven by using it hypodermically, with the same ill effects.

For the local application of medicaments in tumors, rheumatism, gout, enlarged joints, skin diseases, etc., where iodine, the iodides of potassium, sodium or lithium, the mercurials, etc., are to be used, electric cataphoresis is of undoubted advantage.

Does electrolysis take place in such applications? Excepting in the case of chloroform, and possibly with some other chemicals, I think that it does, and it has seemed to me that the chemical constitution of the drug to be used, and the chemical reactions or affinities of the poles, of the galvanic series should be considered in selecting the terminal to be used. It is well known that the anode or positive pole has an acid, and the cathode or negative an alkaline reaction, and that acids and oxygen collect at the anode, while alkalies and hydrogen collect at the cathode. The law of polarity, *i. e.*, that like poles repel and unlike attract, is an universal one, and all substances may be considered, from an electrical standpoint, as being either in a positive or a negative condition. This relation is also recognized by the chemist, and explains the law of chemical affinity, and also of crystallization. This law is beautifully illustrated by the effect of these bar magnets upon each other and upon these tinned tacks.

The following table of some of the more important elements, shows their electrical relation to each other.

Hydrogen is always electro-positive, and heads the list, while oxygen, in electro-negative, standing at the head upon that side.

ELECTRO-POSITIVE BODIES.

Hydrogen,
Potassium,
Sodium,
Platinum,
Silver,
Copper,
Mercury,
Tin,
Iron,
Nickel,
Zinc,
Lead,
Manganese,
Magnesium,
Calcium.

ELECTRO-NEGATIVE BODIES.

Oxygen,
Chlorine,
Iodine,
Bromine,
Nitrogen,
Sulphur,
Fluorine,
Phosphorus,
Carbon.

Whilst these elements are thus arranged, their positions in the scale are somewhat interchangeable. For instance, copper associated in a galvanic pan, in the proper fluids, with any of the elements below it, is electro-positive, but with any above it, electro-negative.

Silver, also, is negative toward lead in a sol of dil. nit. acid; but positive toward it in a sol. of cyanide of potassium. Thus we see that the chemistry of the pole and of the exciting fluid have a relative action.

Regarding electrolysis, which, as before stated, I believe takes place in nearly, if not all, our applications, Prof. Rohé says, "It seems clearly established by numerous experiments that galvanic conduction through liquids is always electrolytic; in other words, that there can be no conduction of an electric current through a liquid without that molecular rearrangement in the fluid through which the current passes, and that molecular disintegration at the sur-

faces of the electrodes, which we know as electrolysis;" and further, that "the various processes supposed to go in the body under the influence of an electric current, and termed by different authors absorptions, electrical osmosis, and electro catalysis, will properly be ranged under the single conception of electrolysis." It is held by some that there is an actual transfer of ions from one pole to the other. By others that there is a polarization of the molecules, so that the electro-negative element is forced toward the anode, and the electro positive element toward the cathode, where the terminals appear as ions. It must be remembered that electro-negative bodies may acquire electro-positive polarity, and *vice versa*, the polarity of the elements depending upon their relations to other elements in a compound rather than upon any intrinsic property. This will account for some otherwise anomalous changes in electrolysis.

Turn now for a moment to the chemical construction of the substances named, and consider them in their relation to the anode and cathode. As a rule, we will consider that electrolysis takes place. The law of polarity, which we have stated, also rules here as elsewhere. The hydrochlorate of cocaine has the formula of $C_{17}H_{21}NO_4HCl$. Used upon the anode, the acids and the oxygen would be collected at that pole, and that alkalies and hydrogen go to the other or cathode, thus being driven into the tissues. The fact that this salt, used upon the cathode, does not produce anæsthesia, proves that both theoretically and clinically its use with the anode is the proper one.

Chloroform, having the chemical composition of $CHCl_3$, and which we may consider as the chloride of the tri-valent radical formyl, would, theoretically, be used also upon the anode, and is so used; but it is denied that electrolysis takes place in this instance. I have not used it with the cathode. We may take any of the salts formed from the alkaloids and an acid, and they all gather under the anodal banner, by reason of their chemical relations to that pole. In all these cases it is the base of the compound which we wish to introduce into the tissues, and not the acid component. However, we use the chlorides, the benzoates, the citrates of potassium, lithium and sodium with the anode. If, however, we wish to introduce the benzoic acid from the benzoate of sodium by this means, it should be used upon the cathode.

Iodide of potassium has heretofore been used upon the anode. The formula here is KI , or a direct combination of iodine with the hydrate of potassium, the iodine taking the place of an acid in this salt. Theoretically it also should be used upon the cathode and not upon the anode.

I have here in this tube a solution of iodide of potassium. Attaching the poles of the battery to the tube, electrolysis takes place, and iodine quickly appears at the anode, while potassa gathers at the cathode. A much more delicate experiment, however, is to take some animal membrane, and force iodine through it from the cathode, thus seeming to establish my theory of both anodal and cathodal diffusion dependent upon the substance used.

To demonstrate this more fully I shall use a solution of the iodide of potassium and some coagulated egg albumen. Saturating this piece of absorbent cotton with the solution of KI , and placing it upon the negative carbon electrode, the albumen upon it, another piece of cotton wet in plain water upon the albumen, on which I now place the positive electrode, and turn on the current. In a very few minutes free iodine appears at the anode, having traversed the albumen, but it does not appear in the inter-polar region in this

instance. You see no effect at the cathode. Reversing now the poles of the battery by the commutator, and keeping the electrodes in the same position as before, iodine instantly appears at this pole; now the anode, because the iodide of potash solution is there, and the iodine, which before came to and collected at the other point, disappears from it. Let us bear in mind that we are now dealing with dead animal membrane, incapable of appropriating and changing a substance passed through it as are the cell tissues and fluids of the living body, when acted upon in this way. The tincture of iodine gives the same result.

Does not this demonstrate that the bromides, and such substances as the iodides and iodine, the cathode should be used?

Iodol has an enormous resistance, and requires a strong current to affect it, if indeed it is decomposed at all.

With some chemicals the metal electrodes seem to be acted upon rather than the tissues, hence I use carbon in preference to any metal, unless it be platinum or gold.

In certain skin diseases, especially those of parasitic origin, I have found the use of the bichloride of mercury to act much more promptly and effectively when used upon the anode than by any other means.

Chloroform will often relieve pain, but we must differentiate a neuralgia from a neuritis in its application, as it is not beneficial in the latter.

Cocaine has not failed, in my hands, in giving relief from pain, but it is not in itself curative. Dr. Starr has called attention to the great diagnostic value of the anodal diffusion of cocaine in determining whether a lesion is superficial or deeply seated. If superficial, as in some forms of tic, the pain is rapidly relieved by the application of cocaine on the anode. If deeply seated, and requiring surgical interference, the pain will not be relieved. In all such neuralgias, cocaine cataphoresis should be used before resorting to a surgical operation.

Reviewing the work done in this branch of electrotherapy, by myself and others, I find that the field broadens as it is more fully entered upon; that new uses for medicaments, or rather an increased range of usefulness for them is found in anodal and cathodal diffusion. With children and nervous patients, it should supplant the hypodermic syringe, both on account of its gentleness of application, but also the entire freedom from any after ill effects, such as abscess or germ infection from an unclean instrument. The method has been found most useful in the treatment of specific cases, Ehrman reporting thirty-four in all who were treated successfully by baths of the bichloride of mercury. He used 12 grains of the mercurial salt in the full bath, and a current strength of 200 ma., the séance lasting a half hour. In lead and mercurial poisoning, a similar proceeding is indicated, with proper medication. In fevers, ringworm of the scalp, herpes circinatus, and other parasitic affections, as has already been indicated, it must prove extremely useful. In some of these conditions I have had very gratifying results. The effects are rapid as compared with inunction, and the current strength can be regulated to suit each case. Constitutional effects need not be produced. I used, in my applications, a 1-1,000 solution of mercury bichloride. Regarding the effects of cocaine when used in this way, it has been proven that even a 20 per cent. solution of that salt may be used in many cases without producing any constitutional disturbance, and, as before stated, that the local application of a medicine

or chemical may be made by this method, with better effect than in any other manner, consequent upon the molecular changes induced by the action of the electric current upon the tissues, fluids and cells of the body. Surely, the question of the anodal and cathodal diffusion of drugs commands our most careful and serious consideration, both as students and clinicians.

THE USE OF GELATINE DISCS IN THE EYE.¹

By JOHN S. STEWART, M.D.,

Ophthalmic Surgeon to the Philadelphia Lying-in Charity.

SOME excuse, perhaps, may be needed for bringing before this Society a subject which can be of practical interest to specialists of one department only; but it has occurred to me that a very brief account of one of the methods of applying medicaments to the eye, which, in my hands at least, has proven highly satisfactory, may be not altogether devoid of interest even to those engaged in other lines of work. I refer to the use of medicated gelatine discs, and in the present instance will consider only the advantages of applying homatropine and cocaine to the eye by this means. Four years ago, in an article on the subject "Homatropine," published in *The Medical News*,² I called attention to the fact of having frequently observed an irritant action exerted on the deep structures of the eye by repeated applications of a watery solution of hydrobromate of homatropine. At that time it was my belief that this irritation was the principal cause why ametropia cannot be accurately estimated in very many cases where homatropine has been employed, and a considerable experience since in the use of watery solutions of the drug tends only to confirm this opinion. That irritation is produced in every instance by this method of practice, I do not pretend to say; but I am convinced that in all cases where there has been considerable and long-continued eye-strain, resulting from efforts to overcome particularly aggravating forms of refractive error, or where chorio-retinal irritation, due to other causes, exists, the homatropine as ordinarily used very often adds to the intra-ocular disturbance, and thereby interferes with attainment of the object for which it was employed, viz.: the accurate estimation of the refraction of the eye.

Another objection which I have to the use of watery solutions of this drug is that a large proportion of the effect is expended on the nasal and pharyngeal mucous tract rather than on the eye, as intended. There is no doubt in my own mind that both the irritant effects on the eye and the, at least, unpleasant ones on the nose and throat are directly due to the necessarily strong solutions employed, ranging, so far as I have been able to learn, from 8 to 24 grains to the fluidounce, instilled in most instances a number of times within an hour.

It is claimed that medicated gelatine discs for ophthalmic use were first made in 1863 by Savory & Moore, of London; but, strangely enough, they have never been extensively used. About five months ago I began to try some of those made at the suggestion of Dr. C. A. Wood, of Chicago, by Messrs. Wyeth & Brother, of this city, and almost ever since, when I had occasion to use homatropine alone or combined with cocaine for the purposes of refractive work, I have

¹ Read at the Philadelphia County Medical Society, March 23, 1892, President John B. Roberts in the chair.

² March 3, 1888.

much preferred these discs to the watery solutions formerly used by myself.

On first thought it may seem unlikely that a single disc, containing $\frac{1}{30}$ grain each of homatropine and cocaine, could exert sufficient influence on the accommodative power; but I have, in most instances at least, found a nearly complete paralysis of accommodation as I have ever been able to obtain with repeated instillations of 2 and 3 per cent. solutions of homatropine. The reason is not hard to discover. Absorption of the drug by the tissues of the eye takes place about as rapidly as the drug itself can be liberated by the dissolving of the gelatine; but when a drop of solution has been instilled, a large proportion necessarily escapes with the tears, or, if it does not get away so quickly, is quite likely to produce in sensitive eyes the chorio-retinal irritation which so often interferes with obtaining the results for which the drug was used.

Very few of my patients who have had these discs in their eyes could detect any effect whatever in the nose or throat, and in these few instances the information was obtained only by questioning the patients on the subject.

In my practice at the present time, in all eyes suitable for the use of homatropine and requiring its use for the purposes of refraction, I am making use of discs containing 1-50 grain each of homatropine and cocaine—either the hydrobromate and muriate respectively, or the alkaloid of each. I have found it an advantage, but not always a necessity, in the case of most of my patients under twenty-five years of age, to insert a second disc of homatropine only ($\frac{1}{30}$ gr.) in each eye as soon as the first is entirely dissolved—usually in about ten minutes. A camel's-hair brush moistened serves conveniently to convey the disc to the eye, and although it has been recommended to place the disc against the scleral conjunctiva—in the grasp of the lower lid—I much prefer raising the upper lid and inserting the disc beneath it, immediately above the outer canthus, then directing the patient to keep the lids tightly closed as in sleep, and to avoid winking until the discs are dissolved.

It has been urged against the use of the gelatine discs that the lids and eyes are thereby rendered very sticky and uncomfortable. My patients have not complained of this; but I think the annoyance was escaped, in large measure at least, by strictly following my injunction about keeping the eyes closed.

As to the reputed advantage of the combination of cocaine with homatropine, I have little to say. It is claimed, of course, that homatropine combined with cocaine dilates the pupil and paralyzes the accommodation more rapidly and effectively than homatropine alone, and that these results are more permanent. This seems usually to be the case; but cocaine is used by me in these cases because of the quieting effect which it produces on most eyes, thus tending, in some measure at least, to overcome the irritant effect of the homatropine, and at the same time to facilitate the measurement of the ametropia.

In conclusion, it should be added that on several occasions I have used the English preparation of Savory & Moore, of London; but there is no hesitation on my part in expressing a preference for the Wyeth discs.

DISCUSSION.

DR. SAMUEL D. RISLEY: I am very glad that Dr. Stewart has given us his experience in the use of the gelatine discs. I have used them but very little, but this limited experience has not afforded me sufficient

encouragement to abandon the use of carefully prepared neutral solutions of the mydriatics. The discs in which the cocaine is combined with homatropine, I have found invariably cause severe irritation, as the cocaine solutions are likely to do, and that the attendant profuse lachrymation is liable to wash away the homatropine before absorption can take place. I have not noticed any gluing of the eye by the dissolved gelatine. The obvious intention in the use of the disc is to secure some rapid means of paralyzing the accommodation, for the purpose of correcting errors of refraction. It is possible that in a certain group of cases, without much retino-choroidal irritation, that this means may be sufficient, as was demonstrated with regard to the use of homatropine in 1881. But there is a much larger group of patients, with well-marked retino-choroidal disturbance the result of eye-strain, in which it is essential to have the therapeutic results of prolonged mydriasis. In these patients the more persistent mydriatics are needed. I have tried to administer these in the gelatine disc again and again, but have always come back to the solution as more satisfactory.

DR. LOUIS J. LAUTENBACH: The gelatine discs of which Dr. Stewart has spoken have been used by me for the past few months. It has seemed rather strange that by the use of a $\frac{1}{30}$ grain of homatropine, or at most of two such applications, that the results obtained were practically the same when from four to eight times this quantity were used in solution, even when the greatest precautions were taken as to its proper instillation, and yet to-day while using the discs, I use them but rarely, relying almost invariably upon the watery solution. The cause for this difference in the quantity of homatropine used is, of course, due to the wasting of the mydriatic when used in solution.

As for the combination of homatropine and cocaine of which Dr. Stewart speaks, there is one very important fact to be mentioned—that is, that every once in a while we will find that after the use of this combination we will find a hazy cornea that is due to a disturbance of the corneal epithelium occasioned by the cocaine, and sometimes this disturbance of the epithelium will occur in a case where it will interfere completely with the determination of the refraction. It is almost impossible to determine the exact amount of astigmatism when the cornea is thus disturbed, the greatest interference being in cases of astigmatism of small amounts, and here we occasionally will be compelled to discharge our patient for the day without having obtained any satisfactory results, being compelled to re-examine the patient at some other time under the influence of this or some other mydriatic.

DR. EDWARD JACKSON: Some careful comparative tests convinced me that the gelatine discs containing homatropine and cocaine produced a somewhat greater effect on the accommodation than did a drop of the solution containing the same amount of the drugs. A single disc did not, however, in any case produce complete and satisfactory paralysis of the accommodation in a young person. Two discs commonly did.

With such discs, as after any use of cocaine for measuring refractions, one must remember the precaution of keeping the eyes closed to avoid drying of the corneal epithelium and consequent irregular astigmatism. My trial of the gelatine discs has not led me to adopt them in the place of solutions.

DR. CHAS. HERMON THOMAS: Homatropine in solutions of 1 to 40, dropped into the eye at intervals of five to ten minutes four or five times, is an effective

means of completely paralyzing the accommodation. But these instillations should be made by the surgeon himself, and the refractive measurement should begin within a short time after the last instillation.

There is a little knack which I have been in the habit of resorting to for some years, which, I think, is of practical value. It consists in striking off a small drop from the pipette upon the edge of the upper lid, slightly separated from the globe, but without eversion. This manipulation favors the distribution of the alkaloid over the cornea. Used in this way, I have never seen conjunctival or ciliary irritation of any importance, certainly nothing to interfere with a satisfactory measurement.

The atrophias discs of Savory & Moore, to which allusion has been made, were tested at Wills Hospital when I was a resident in 1865. The immediate effect of the application of these discs was found to be more disturbing to the patients than the solution, and their use was, therefore, soon discontinued.

DR. L. WEBSTER FOX: The use of medicated gelatine discs in ophthalmic work dates back for more than a decade of years. I have a variety of these discs in my possession which I brought with me from London in 1881. I still occasionally use them, and find them to answer as well as certain aqueous solutions of the same drug.

I had samples of the gelatine discs, described by Dr. Stewart, sent me by Wyeth Bros., which were made after the formula suggested by Dr. Casey Wood, *i. e.*, homatropine and cocaine in combination. I found that the use of this combination produced two distinct trains of symptoms in the eyes of the majority of my patients: First, great irritation to the conjunctiva and corneal epithelium; and second, on account of this corneal disturbance, the transparency of the cornea was lessened, and in consequence the visual acuity was modified. I had discs made containing homatropine alone, hoping thereby to lessen the corneal disturbance, but I must say that I get equally good results from aqueous solutions, and with much less conjunctival irritation and annoyance to patients. They are not without advantage, however, and in certain forms of iritis I use them, combining the drug daturine instead of atrophina.

SOME CASES OF OBSTRUCTIVE DISEASE OF THE LACHRYMAL PASSAGES AND THE ASSOCIATED INTRA-NASAL LESIONS.¹

By G. E. DE SCHWEINITZ, M.D.,

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THE intimate relationship between diseases of the lachrymal apparatus—that is, of the drainage system of the eye—and various types of inflammatory changes in the nasal mucous membrane is an old story. Indeed, the close association of ocular and naso-pharyngeal disease is not limited to these conditions. The great majority of phlyctenular ophthalmias depend upon some type of rhinitis, and are often the direct outcome of adenoid growths in the pharynx. Many obscure symptoms which we are wont to describe under the general term asthenopia, have been shown to depend upon intra-nasal disease, and a variety of orbital, ocular, and post-ocular pains are frequently “referred pains;” that is, their origin is from some lesion

within the nasal cavity, the frontal sinus, ethmoid cells, or antrum of Highmore. In fact, as Harrison Allen has remarked, a good deal of the success of treatment depends upon a proper attention “to the commonality of the various parts of the cephalic mucous membrane.”

The following cases are reported, not because they illustrate new points, but because they emphasize some old ones, and still more because they emphasize that the cure of obstructive lachrymal disease is materially facilitated not merely by the ordinary measures adopted for rendering the passages patent, in association with what may be called routine intra-nasal treatment (for I take it no one attempts to treat lachrymal disease without due attention to the nasal mucous membrane), but that more radical measures are frequently of value when applied to the nasal chambers and the vault of the pharynx, which in the vast majority of cases are the regions primarily affected.

Case I.—*Purulent Dacryocystitis; Traces of Old Rhinitis and Abnormal Shape of the Lower Turbinate Bone.*—D. D., a boy, aged seven years, reported for treatment November 3, 1890. Three years ago pus began to exude from the right punctum lachrymale, and in spite of treatment this condition has continued ever since. The boy was healthy in other respects; he had never suffered from measles nor scarlet fever; was free from the evidences of inherited syphilis, and had sustained no injury. His voice was slightly nasal in tone.

The lower canaliculus was slit, and a firm stricture was found at the beginning of the nasal duct. The probe was not forced; neither was the stricture incised.

The patient was referred to Dr. Alexander MacCoy for nasal examination, who reported as follows: “The right nostril shows an abnormal shape of the lower turbinated bone, also some evidence of a severe rhinitis during the past. I believe that the position and form of the lower turbinated body have had much to do with the disease of the duct on account of the obstruction to its entrance at its lower portion into the nasal chamber. The boy also has a pharyngeal tonsil, which obstructs the posterior nares somewhat.” Dr. MacCoy undertook the treatment of the nasal condition, and after a few days the stricture was incised, the probe passed, and the usual treatment instituted. After the intra-nasal obstruction was removed the epiphora ceased, and has not reappeared.

I have referred to this case in a paper on the use of pyoktanin in dacryocystitis (*University Medical Magazine*, vol. iii. p. 181), and may repeat that my colleague, Dr. Gould, as well as myself, has had favorable effects from this drug in the treatment of unhealthy lachrymal secretions.

The case is now utilized, however, to illustrate what seems to me a very important point to which Dr. MacCoy calls attention in his report, namely, that although the stricture of the duct, which in this case existed high up, was penetrated, and although the fluids and the probe passed readily, the epiphora continued because of the malposition of the turbinated bone. Indeed, this obstruction sometimes exists only in the form of a small flap of mucous membrane, which closes the entrance of the duct into the inferior meatus very much as a valve would do. This effectually prevents the drainage of the eye, and unless it is removed good results will not follow. In this particular instance it was very easy to see the obstruction by first passing a probe and then exposing the entrance of the duct into the meatus by means of a nasal speculum—a slight precaution which will often lead to the discovery of the cause

¹ Read at the Philadelphia County Medical Society, March 23, 1892.

of a persistent overflow of tears in spite of apparent permeability of the passages.

CASE II.—Catarrhal Dacryocystitis; Bands of Adhesion from the Inferior Turbinate Body to the Septum.—Ella H., aged twenty-eight years, reported for treatment at the Philadelphia Polyclinic, October 24, 1891, on account of an inflammation of the right eye, which had existed for several days. There was a small abscess at the inner margin of the lower lid, with a fistulous communication into the lachrymal sac. A free muco purulent secretion distended the sac in the form of an ordinary mucocele. The canaliculus had been slit at some previous time, but a probe did not pass readily.

She was referred to the throat department, and examined by Drs. Arthur Watson and Walter Freeman, who reported as follows: "Atrophy of both inferior turbinates; unable to obtain a posterior view; former ulceration of the posterior wall of the pharynx; bands of adhesion from the inferior turbinates to the septum; also one from the middle turbinate to the septum on the right side."

Even in the absence of definite history, the pharyngeal condition seemed to indicate syphilis. The patient was ordered an astringent lotion, given potassium iodide and bichloride of mercury, and referred to the throat department for treatment. In January of this year an operation was made upon the lower turbinated bone, and the condition has improved without the passage of probes, the secretion and the epiphora having materially lessened.¹

This case, it seems, illustrates the ordinary intra-nasal lesions, which were evidently at the bottom of the lachrymal trouble, and is further interesting because these lesions give confirmatory evidence of the syphilitic condition, so much so that relief was facilitated by the proper constitutional remedies.

CASE III.—Lachrymal Abscess; Spur on the Septum Opposite the Middle Turbinate Bone; Chronic Pharyngitis.—Sarah S., aged forty-five years, reported for treatment at the Philadelphia Polyclinic, November 24, 1891. In April, 1891, epiphora began in the left eye, for which she seems to have undergone no treatment. It continued until about one week ago, when suppuration of the lachrymal sac took place. When she presented herself there was a very marked lachrymal abscess. The pus was evacuated by an external incision, the sac freely irrigated with an antiseptic fluid, and the patient referred to Drs. Watson and Freeman for an examination.

They reported as follows: "On the left side there is a spur on the septum opposite the middle turbinated bone; also hypertrophy of the tissues. The turbinates are small. There is chronic pharyngitis, a thick phlegm covering the tissues."

Unfortunately this patient has failed to report with any regularity, and the ultimate result cannot be given. This example illustrates the course of so many of these cases, namely, a chronic pharyngitis and hypertrophy and inflammation of the intra-nasal mucous membrane; involvement of the lachrymo-nasal duct; epiphora, owing to an obstruction primarily from swelling of the mucous membrane, and later from the formation of a positive stricture. Under the influence of the pressure and of the stricture, the fluids of the conjunctival sac are not drained but distending the lachrymal sac, become infective, an abscess forms, and the condition which has been described results.

CASE IV.—Epiphora; Atrophic Catarrh.—Jane C., aged sixty years, reported for treatment at the Philadelphia Polyclinic, November 14, 1891, complaining of pain in her eyes, constant epiphora, and inability to read on this account. There was considerable hypermetropia and some astigmatism, and, as epiphora is frequently caused by the strain of uncorrected ametropia, proper glasses were ordered, but the overflow of tears continued. Both canaliculi were then slit. There was narrowing of the ducts, but no stricture, and probe and fluids passed readily. The epiphora improved, but did not disappear.

She was referred to the throat department, and the following report was received: "There is an atrophic condition on both sides, and a spur on the septum on the right side near the opening of the lachrymal duct, but it does not interfere. The closure is probably due to contraction from atrophic changes."

This is a good example of a very common condition, most frequent in elderly people, where there is neither disease of the sac, stricture of the duct, nor pressure from a spur or hypertrophy of the turbinated bodies, but where the obstruction depends upon constriction from atrophic changes.

CASE V.—Phlegmonous Dacryocystitis; Deflection of the Septum; Spur on the Left Side Pressing on the Inferior Turbinate Bone.—Matthew L., aged twenty-seven years, presented himself for treatment on account of an extensive lachrymal abscess with a small opening and widespread infiltration of the tissues, producing a large swelling involving the lower lid and cheek. The abscess was incised, the pus cavity freely washed out, and an antiseptic dressing applied. In a day or two the swelling had subsided, and nothing remained but a slight brawiness of the tissues and a fistulous opening at the point of incision. The canaliculus was slit, but all efforts to introduce the probe proved futile. The patient had been much exposed to weather; had a history of an old injury, but denied syphilis. The obstruction to the tear passages had existed since the early fall.

He was referred to the throat department, and the following report was received: "The septum is irregularly deviated in front; there is a spur on the left side pressing on the inferior turbinated body, which also contains an ulcer in its anterior portion."

He was warned that "catching cold," which would increase the nasal obstruction, would certainly bring about a relapse of the abscess. He went to work, however, and returned a few days afterward with all of the lesions previously described in a very much more aggravated state. The same treatment was instituted, and he was again referred to the throat department, and on the 23d of February the hypertrophy on the left side was removed. On the same day a probe was passed, and since this time its passage has been repeated. Epiphora still continues, but is decreasing day by day.

This example illustrates the mechanism of relapse in many of the tear-passage cases, in this instance producing a very serious phlegmonous inflammation. Under treatment and rest sufficient drainage takes place to produce amelioration of the symptoms; then swelling from congestion, owing to exposure, is added to the organic obstruction already present, producing complete closure with an exacerbation such as has been detailed.

CASE VI.—Stricture of the Nasal Duct; Moderate Hypertrophy of the Inferior Turbinate on the Left Side and a Spur on the Right Side.—Bridget R., aged fifty years, applied for treatment to the throat department of the Philadelphia Polyclinic, and the follow-

¹ Recently there has been a relapse in this case. Attention to treatment has not been regular.

ing lesions were found: A moderate amount of hypertrophy of the left inferior turbinate near the nasal duct, and a spur on the septum of the right side close to but not obstructing the opening of the duct. With these lesions there were epiphora, most marked in O. D., and slight lachrymal conjunctivitis. She had not been able for a number of months to use her eyes with any comfort. She was referred by Drs. Watson and Freeman to the eye department. The canaliculi were slit, and a stricture was found at the mouth of of each sac. A No. 2 Bowman's probe was passed without difficulty.

It is evident that though there were lesions in the nasal passages, they were not obstructing the duct, but under the influence of the chronic nasal inflammation a stricture had formed in the lachrymal canal.

CASE VII.—Epiphora from Swelling of the Mucous Membrane of the Lachrymosal Duct; Atrophic Rhinitis.—A. K., an unmarried woman, aged twenty-six years, was referred to me by Dr. Ralph W. Seiss, on account of epiphora of the right eye, which had persisted for some time in spite of the nasal treatment. There was no swelling of the lachrymal sac, no catarrhal or purulent secretion, but simply an overflow of tears. The general health was good, the eyes not far from emmetropic, and there was neither asthenopia nor headache.

Dr. Seiss has kindly furnished the following report of the nasal lesions: "Atrophic rhinitis presenting the ordinary appearances of tissue-destruction, combined with some odor and much secondary laryngo-bronchitis."

The canaliculus was slit, and a No. 3 Bowman's probe was passed without meeting a stricture, but with a resistance to its passage which is characteristic of obstruction from swelling of the mucous membrane. After the passage of this probe, the duct was irrigated on several successive days with a solution of boracic acid and common salt, without, however, passing the canula into the duct. The fluid trickled readily through the nose. The epiphora stopped after a few treatments, and has never returned, although many months have gone by since she originally reported.

This patient represents a common class of cases of epiphora associated with chronic inflammation of the naso-pharynx. A somewhat similar inflammation occurs in the nasal duct, but does not produce a true stricture; the occlusion is from swelling, not from cicatricial changes. In many cases it is sufficient to do what was performed in this case; in others even milder measures suffice. Above all things, this is an example of a class of cases the successful treatment of which I have learned especially from Dr. Risley, by obeying the principle which he was wont to instil, not to be too ready to pass probes and canulas, lest their introduction scrape away some of the mucous membrane, and really do more harm than good. It is unnecessary to do more than medicate the swollen mucous membrane with any solution that is suitable. I like boracic acid and common salt very much.

Many more cases might be quoted, but these seven representatives of various classes are sufficient to illustrate the points which I desire to make:

1. A large class of cases exists characterized chiefly by epiphora without catarrhal or purulent secretion, in which the obstruction in the lachrymo-nasal duct depends upon swelling of its mucous membrane, and not upon true stricture. The primary origin of these cases, in the great majority of instances, is a chronic or subacute post-nasal catarrh. The evident indication is the treatment of the latter condition and the

medication of the swollen mucous membrane of the lachrymo-nasal duct, so that it may regain as nearly as possible its natural condition, which it will do without much instrumental interference—an interference that may of itself, if unskilfully performed, be the cause of a cicatrizing band that never originally existed. Case VII of the series illustrates this class.

2. The life history, if I may so express myself, of many cases of obstructive disease of the lachrymo-nasal duct and the formation of a lachrymal abscess is illustrated by Cases III and VI. First, a chronic pharyngitis occurs; later, hypertrophy and inflammation of the intra-nasal mucous membrane, followed by swelling of the lining tissue of the lachrymal duct. Gradually cicatricial changes arise, and a true stricture is formed. The drainage of the conjunctival cul-de-sac ceases; the micrococci natural to the part, and those which readily find access to this region, permeate the contents of the lachrymal sac, because this can no longer be emptied; the pathogenic micro-organisms exercise their true function, and suppuration occurs.

3. A number of cases develop, chiefly in old people, in which there is epiphora; again without the presence of pus or muco pus, depending upon obstruction in the lachrymal duct from atrophic changes, the whole being a part of a similar atrophic process in the intra nasal passages, and generally described under the term atrophic catarrh. The obstruction in these instances is not from swelling, not from stricture, but from contraction. Case IV of the series is an example.

4. A very common cause of an exacerbation of lachrymal disease is due to the pressure of a hypertrophic turbinate body, or similar intra-nasal obstruction, which under treatment has gradually subsided, but which, owing to exposure, swells up again, and exercises its obstructing influence. At once there is occlusion of the lachrymal passages and recrudescence of the symptoms. The very serious nature of such cases is illustrated in Case V of the series.

5. In every case of local disease the physician should be mindful of constitutional causes. The value of confirmatory evidence by pharyngeal and intra-nasal examination is illustrated in Case II, an example of constitutional syphilis. Local treatment may be very necessary; local treatment without general medication is ineffectual.

6. Finally, I come to the class of cases in which there exist an obstruction at the intra-nasal end of the duct (it may be trivial), permeable by the fluids used in a syringe, but an impassable barrier to the outflow of tears. Even the slightest obstructions, under these circumstances, may defeat the most classical treatment of lachrymal disease. The ready detection of such a lesion is illustrated in Case I of the series.

It has not been my intention, this evening, to refer to what are the best means of treating lachrymal disease, except in so far as these are implied by the description of the lesions which existed in the examples I have reported. Whether we believe that small or large probes should be passed; whether we class ourselves with those who believe that the probes should not be used at all; whether we are the advocates of this or that antiseptic and astringent fluid; whether we think that strictures should be incised or should not be incised, or whether we believe in the permanent wearing of styles or canulas, it is evident that the rational treatment of certain types of obstructive lachrymo-nasal disease must also include not alone the ordinary intra-nasal treatment with sprays

and powders, but a systematic and thorough examination of the naso-pharynx, and, if necessary, the best operative interference known to intra-nasal surgery.

DISCUSSION.

DR. EDWARD JACKSON: I have very little to add to this paper. We are not in a position to generalize widely on this subject, or determine how many cases, or what proportion of cases, belong to that group in which the obstruction comes originally from the nasal chambers. Certainly I have not studied enough of these cases to go further than to simply consider individual instances and study the lessons that they seem to teach. A case that comes now to mind is one that was treated some years ago at the Polyclinic for lachrymal obstruction. He recovered, or at least got into such a good condition that he ceased to attend. Within a few months he returned to the clinic with a renewal of his epiphora, and on passing a probe I found no obstruction until the lower end of the duct was reached. There the obstruction was very noticeable, although no great difficulty was experienced in passing the probe. He was referred to the nose and throat department, and there was found a cicatrix involving the lower end of the duct. Whether this cicatrix was connected with the former treatment, or whether it resulted from the original nasal lesion, I am not prepared to say. Its removal certainly removed the obstruction to the flow of tears.

I recall two cases in which the thickening of the mucous membrane at the opening of the duct into the nose was the sole cause of the epiphora. Probably in the great majority of cases of lachrymal obstruction the original obstruction has been seated at one end of the canal. I do not think that it is always, and perhaps not in the majority of cases, that the trouble begins at the lower end of the canal coming from the nasal chambers. Frequently it commences with the puncta. Some of the obstinate cases that have come to me with a history of slitting up of the canaliculi, and long continued treatment with probes without permanent benefit, have shown a grave error in the position of the incision into the canaliculus. Instead of on the conjunctival surface, the cut has been made on the upper edge of the lid, so that the tears could not get into the passage until they ran over the edge of the lid. These cases are liable to a return of the acute trouble, for if the normal flow of the fluid through the lachrymal sac and duct is not sustained, micrococci which enter find the conditions most favorable for free development and the setting up of pathological processes.

DR. SAMUEL D. RISLEY: The facts which Dr. de Schweinitz has set forth in this admirably reported group of cases are of great practical importance, both to the ophthalmologist and those who treat the diseases of the naso-pharynx. The conditions so aptly described suggest many points of great importance. It recalls some of my early experiences in the treatment of lachrymal disease. I remember the case of a Mr. C., whom I had treated for a long time in 1879 for lachrymal retention unsuccessfully. There was no stricture of the duct other than that due to a more or less uniform thickening of the mucous membrane, but there was, nevertheless, more or less constant epiphora. Incidentally, he called my attention to some trouble with the nostril on the side of the affected tear-duct. I discovered a broad superficial ulcer underlying the anterior end of the inferior turbinate bone. This was speedily cured by a few applications, and his lachrymal trouble soon disappeared. This

was the first inkling I had received of the important relation which might exist between certain cases of lachrymal disease and affections of the nasal passages. At that time, so far as I knew, literature was silent upon the subject. From that time to this it has been my uniform practice to carefully inspect the nose in every case of lachrymal disease.

Dr. de Schweinitz's paper is an admirable statement of facts, with which my own experience is strictly in accord in a large group of cases suffering from this very troublesome and persistent affection. These facts explain why so many cases of epiphora present no marked stricture of the lachrymal duct. I have also had experiences the counterpart of that related by Dr. Jackson, where the probe was passed freely until the nasal end of the duct was reached, and there, meeting with resistance, if forced roughly into the nose will cause bleeding from laceration of the inflamed and swollen mucous membrane, closing or blocking the nasal orifice of the canal.

Another practical bearing of these facts in ophthalmic surgery is, that since the lachrymal passages are liable to disease by extension upward from the nose, which furnishes such perfect conditions for the rapid development of microorganisms, the nasal passages may become the source of infection for the eye itself. It suggests the necessity for great care in this direction, particularly before and after operations upon the eye. We may deluge the conjunctival sac with antiseptic lotions before opening the anterior chamber, bandage the eye, and imagine that all has been done for the safety of our patient, whereas the facts set forth this evening suggest the possibility of infection from the nose through the lachrymal duct. With this possibility in mind, I have of late years recognized the importance of washing out the lachrymal sac and nasal passages with bichloride of mercury solution where I expect to bandage the eyes after operation.

If affections of the nasal mucous membrane are then the origin of a considerable group of cases of lachrymal disease, it is obviously unwise to treat the duct harshly by probing until after the nasal disease is excluded. The function of the lachrymal duct is not performed in the manner of a drain pipe, but is rather a capillary tube, and its inflammations may often be cured by washing with suitable lotions. Probing is often necessary, but rarely with the idea of dilating the capillary tube into an open canal. In 1877 I urged that the proper function of the probe was to produce absorption of the products of inflammation in the thickened membrane lining the duct, rather than the rupture of a stricture or dilatation of the duct.

DR. ALEXANDER B. RANDALL: I do not think I can add anything to what has been said. I have not met with a great deal of lachrymal trouble in the three or four thousand cases seen at the Episcopal Hospital. I have met, in that number, only thirty that required absolutely lachrymal treatment. I recall a large number of cases where the nasal trouble seemed to be the cause of the affection, and where treatment directed solely to the nose has resulted most happily. In a large number of cases of children with watery eyes I have never, I believe, with one exception, used any other treatment than that to the nares and lower end of the duct, and have had no reason to regret the absence of other forms of treatment. I have always thought that the puncta, with their direction towards the ball, and the arrangement of the upper part of the lachrymal passage, had a decided physiological purpose, and that it was a great disadvantage to treat these parts by incision

and probing if there were no absolute necessity for it. In directing attention to the primary incision and to the constitutional treatment of the case, my results have been most satisfactory with a minimum amount of necessity for surgical procedures directed to the upper part of the lachrymal passages.

DR. RALPH W. SEISS: With regard to the nasal lesions found in these cases, in the instances that I have seen they have been almost altogether of two types. One is enlargement of the anterior nasal spine, with ecchondroses of the septum and swelling of the mucous membrane; the other is atrophic and sclerotic changes. It is important to keep this in mind, as it has an important bearing upon the treatment. The galvano-cautery is an admirable agent in the treatment of nasal troubles, but it must be used with caution in these cases. I have seen seven or eight cases of lachrymal obstruction following the reckless use of this agent to the lower turbinated body. When I receive such a case for treatment I am more apt to use trichlor-acetic acid or a single crystal of chromic acid than the cautery.

DR. L. WEBSTER FOX. There was one point which was not discussed by Dr. de Schweinitz in his paper, and yet my observations have led me to believe that it plays a very important rôle in the causation of lachrymal disturbances, and that is, the asymmetry of the face. A deviation from the middle line by the nasal bones or septum would perforce cause a modification of the caliber of the lachrymal canal on that side. Any irritating substance lodged in this constricted channel could not find easy escape, and in consequence inflammation develops which eventually would lead on to lachrymal abscess. Then, again, closure of both upper and lower openings of the canaliculi caused by chronic conjunctivitis or blepharitis, proves again that asymmetry must play a factor in these cases, for with both eyes afflicted more or less, but one side of the drainage canal is affected. In 1884 all cases of lachrymal obstruction applying to the eye department of the Germantown Hospital were referred to Dr. S. MacSmith for nasal examination. I was in hopes that we could trace all lachrymal disorders to disturbances in the nasal cavities, but we were doomed to disappointment. While a certain number of cases had undoubted nasal complications, yet in many the lesion was found on the side opposite to the epiphora or lachrymal abscess. In some few cases we found the applied treatment to the nasal cavity did give relief, but in the majority we found that you must apply treatment to the orbital end of the canal to obtain good results. Dr. de Schweinitz did not dwell upon the treatment of lachrymal disturbances, which I regret; for, after all, we desire to learn from each other the best means by which a cure may be brought about, or at least to alleviate our patients. My experience has led me to adopt the larger Cawper probes, followed by the insertion of a silver tube. In certain forms of epiphora a simple dilatation of the mouths of canaliculi will alleviate the patient, or slitting up, as suggested by Mr. Bowman; but where you have a stricture or lachrymal abscess, or both, I adopt the radical treatment—dilatation to its fullest capacity. As regards the application of astringent washes, I have never had much success from their use alone.

DR. CHARLES HERMON THOMAS: The paper which Dr. Schweinitz has read is an interesting and valuable contribution to the treatment of lachrymal obstruction. It, and especially the discussion which has taken place, has strongly emphasized a phase of the subject on which I confess I have not laid much

stress in my own experience, which has withal been a not unsuccessful one. For a good many years I have had such satisfaction in the treatment of these cases as to leave little to be desired. I do not doubt that many of these cases can be relieved from the nasal side, but I must believe that there are a number of cases which can hardly be treated successfully in this way, exclusively cases in which the irritation has been so long continued that it has resulted in what might be called organic stricture as distinct as stricture of the urethra. Such cases certainly demand local treatment at the point of obstruction.

It was in 1868 that Stilling made the announcement of the results obtained by the use of the knife which he devised for the purpose of cutting strictures of the lachrymal duct. I was impressed with the value of the method of treatment proposed by him, and also with the want of adaptation of the knife which Stilling figured for the purpose. It seemed to me that the stiff, conical blade was faulty. I therefore devised a knife with a blunt conical tip, with the edge so set as to cut in withdrawing only, and attached to a flexible shank so that it could be bent to conform to the shape of the bony canal, and yet be rigid enough to control the blade. By slitting the lower canaliculus and first passing some of the more delicate probes, especially those of Dr. Williams, of Boston, this knife may be slipped down and a free linear incision made. The stricture is then divided completely even to the bone, and a large leaden style is introduced and allowed to remain for a few days or weeks at most, being removed daily for a time, for the purpose of washing the passage with some antiseptic fluid. By this method I have had such success as seems to leave little to be desired, and can hardly think that the time has arrived to abandon that method altogether and turn these cases over to the rhinologist. Indeed, I do not now recall a single case in which I had difficulty from obstruction at the lower end after I had gotten a passage through. The facts brought out by Dr. de Schweinitz doubtless make it most desirable to have the nasal passages of patients suffering from epiphora examined, and any abnormalities found therein treated. It is my purpose to return to this subject in the near future, and to enter more into details as to the method of treatment here briefly sketched.

DR. GEORGE M. GOULD: I wish to go one step further than Dr. Thomas in emphasizing the importance of ophthalmological treatment as such. There can be no question as regards cases such as Dr. de Schweinitz has presented. When there is absolute impermeability of the nasal end of the duct, the treatment is, of course, outlined by the diagnosis. In the greater number of cases, however, there is not absolute obstruction of the duct, but simply a stenosis, an unhealthy congested condition of the lachrymal mucous membrane, the duct certainly being patent to some extent, but not enough to carry off the large excess of tears. The frequent use of probes has seemed to me not only not necessary, but simply superfluous in these cases.

During the past year I have employed a plan of treatment in such cases, which has been so successful that I shall outline it. It consists in slitting the punctum vertically downward toward the palpebral fold, in order to increase the size of the opening. Then canting the patient's head to one side, the corner of the eye is filled with an antiseptic astringent lotion. The duct should first be emptied by pressure, and then allowed to fill with this solution. This procedure of emptying and refilling the duct is repeated sev-

eral times, and thus the antiseptic solution is brought in contact with canaliculus, sac, and duct by capillarity and pressure. I have had cases in which, after showing the patient the method once, he has afterward practised it himself and came back in a week perfectly cured. The method is simple and effective, and can be carried out at home. I have often wondered in those cases where probing has been employed, whether it was the probe or the antiseptic lotion that had done the good.

In regard to slitting of the canaliculus, I may say that I do not do this at the beginning of the treatment. If there is narrowing of the puncta the fluid enters more readily if it is cut.

DR. GEORGE FRIEBIS: I should like to ask whether, in the experience of Dr. de Schweinitz, he has met with obstruction due to such causes as inflammation and enlargement of the caruncle? I have in mind one case (a male adult, past middle age), in which I paid little attention to the inflamed caruncle, and the case did not improve under the routine treatment. Upon recognizing the inflammation of the caruncle as a possible cause, and treating it with astringents, I succeeded in curing the epiphora without further instrumental interference.

DR. DE SCHWEINITZ: I have presented this series of cases simply for the purpose of classifying one of the many varieties of lachrymal obstruction. I beg Dr. Thomas will not think that I wish to transfer the treatment of lachrymal obstruction to my friends, the rhinologists, much as I value their aid in the management of some of these cases, and I heartily agree with Dr. Thomas and with Dr. Gould, that the ophthalmological treatment of lachrymal obstruction is of paramount importance. These cases illustrate merely certain failures in treatment when applied to the ducts alone, because there is obstruction either at the inferior end of the duct or from intra-nasal lesion. I have not intended this evening to include the large number of cases due to obstruction in the canaliculus from polypi; from tear-stones, from fungus, or to the cases of obstruction high up, or to those which result from conjunctivitis and from malposition of the punctum lachrymale. Dr. Fox's observation in regard to asymmetry of the face is an important one, and deserving of much study. In regard to the use of large probes, I might not find myself in accord with Dr. Fox. Abnormal position of the caruncle or its enlargement, as referred to by Dr. Friebis, is an interesting anomaly. You are all familiar with the cases reported by Von Graefe and by Horner. I have some knowledge of a similar case occurring in the practice of Dr. Wallace, of this city. Cases of this character, or others which have been brought up in to discussion, have been purposely omitted in the paper of this evening. My idea was simply to show that certain examples exist, and that they are not infrequent, which can be treated better with than without the aid of the rhinologist.

The Polyclinic.

COOPER HOSPITAL, (N. J.) NOTES.

CORPOREAL ENDOMETRITIS.

FOR the treatment of corporeal endometritis, accompanied with more or less purulent discharge, applications to the endometrium of saturated tincture of iodine will be found as serviceable as any of the local remedies usually employed. If the discharge

from the cavity of the uterus is profuse, dilatation of the cervical canal to admit of free drainage, and the removal of the diseased endometrium with a curette will hasten the cure. Free drainage is as essential as intra-uterine applications.—*Godfrey.*

JAMBUL IN DIABETES.—I would sum my experience with this drug as follows:

1. Both the fluid extract and the powdered seed of jambul have virtue in diabetic disease of the saccharine variety, but, of the two, I prefer the seeds powdered.
2. They show their favorable action by reducing the quantity of sugar, allaying irritation, healing excoriations, diminishing the quantity of urine, and restoring it to its normal consistency and color. In addition, what is of great importance in this disease, they keep the bowels in a well regulated condition.
3. In neither case could I find much difference with or without the codeine, with the exception that it allays a tendency to nervousness.
4. I attribute the more rapid improvement of the first case to the fact that he was in a position that he could give up his work and rest, while the last case reported has all along been compelled to do all of her housework and care for her family.
5. I don't believe the full power of jambul will be made manifest unless careful attention is given to diet.
6. From the facts I have elicited in these cases, I am led to believe that in jambul we have an efficient help in the treatment of this disease.—*Braymer, Med. Age.*

SPECIFIC MEDICATION.—*Tape-worm.*—My best results have come from a combination of the active principles contained in pomegranate, male fern, and kameela. This has been prepared by a competent chemist after considerable experiment, and a pleasant liquid compound has been obtained, which can be taken without difficulty even by a child, all the disagreeable features of the crude drug having been eliminated. The dose of the mixture is one ounce; one dose usually removes the tape-worm. It should be given after a light breakfast, and followed in two hours by a brisk cathartic, such as compound powder of jalap and senna.

Headache.—Commencing in the morning and continuing until evening, regularly every day, is usually malarial in character; such a state of affairs is sometimes called "sun pain," in the belief that it is due in some way to the sun, the reason for this belief being that the pain commences with the rising of the sun, and ceases at the setting thereof. But, however, the periodicity of the neuralgia, although bearing some relation perhaps to the diurnal movement of the god of day, does not always commence at sunrise, nor cease at sunset. It may come on at various hours in the early part of the day, and continue into the night; or, in some cases, the pain may commence in the evening, and continue until morning. Following the sun-pain idea we might suppose this to be a moon pain. Be that as it may, the fact remains that there is a form of neuralgia marked by periodicity, and generally confined to the frontal region, but which may affect any part of the body. This morbid state is cured by the administration of quinine in 15-grain doses once daily. The medicine may be given in capsules, three in number, each containing five grains. They should be taken at intervals of one hour, the last one an hour before the usual time for the appearance of the headache. In three or four days the neuralgia will have disappeared.—*Electic Med. Jour.*

The Times and Register

A Weekly Journal of Medicine and Surgery.

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SCIENCE IN THE COURT ROOM.

THE sneers of the press and the contempt of judges and lawyers at conflicting medical testimony, comes from profound ignorance of scientific truth and assumptions that the law represents fixed principles. The dogmatism of judges, who assert that law principles are above science, are re-echoed by the press, and public sentiment endorses it. Medical witnesses are not permitted to testify to any facts in conflict with a legal conception of the case. In a sharply contested trial, where the limits of the law are closely followed, it is not possible to bring out the facts of science. No matter who the witness may be he will not be permitted to give all the facts, or to make clear any part that conflicts with either side of the case. The scientific facts of a case are of no value unless they help to win, and are always ignored by the judge, if in conflict with rules of law. These are matters of common observation and, while deplorable in themselves, are trifling compared with the tendency among physicians and even medical journals to sneer at medical testimony in court rooms. Of course, this is but the reflex of some public sentiment and unreasoning time-serving physicians, who have but limited knowledge of the subject. In a recent case a medical journal condemned the testimony of two medical men, who ventured to say that a defaulter was insane from general paralysis. This was an echo of the daily press, who, after denouncing such testimony, intimated that every criminal could find medical men who would swear to his insanity. Some months after, the diagnosis of these experts was sustained, but no mention was made of this fact.

Recently a murderer was pronounced insane, and the medical testimony was ignored, and became the subject of bitter comments. The man was hung, but later evidence brought out the fact that he had been twice under treatment for acute insanity. Medical journals that never rise above the levels of daily press criticism in their estimates of the motives and reasons for medical testimony, are far behind the front ranks of science. Medical men, who suppose that it is possible to bring out clear, broad facts of science in the

court room, have much to learn. The profession is practically at fault for much of the confusion of medico-legal science.

Testimony of the full responsibility and mental soundness of a criminal, whose unnatural conduct and unusual history is a physiological contradiction of this statement, may be popular in the court room, and be applauded by moralists; but it only brings confusion to science. Editorials on the confusion of medical opinions, and the peril of finding disease instead of vice, have not the *ring of science*, and are not hopeful indications of evolution and growth.

The medical witness should refuse to submit to the partial questioning of lawyers, who only seek half truths or falsehoods as they may aid the case. He should have ample opportunity to study and formulate his opinion, and group all the facts and authorities which sustain such views. He should have an opportunity to come in court and explain such views further for the benefit of the court and jury. The counsel should not be permitted to criticise or question except through the court, and the witness should have ample time to answer. Thus the inquiry of the scientific side of the case would be conducted with judicial fairness and command the respect of all. No medical witness should be required to go on the stand and give explicit answers to misleading or ignorant questions. He should have the same privilege of a judge to study the evidence and form his conclusions at leisure, and have all the facts carefully studied. The evidence of the case, so far as it bears on the scientific side, should be submitted to the physician, who would, after due study, present to the court and jury.

The present methods are a mockery of science and truth, and some new plan must be devised and adopted practically in the near future.

T. D. CROTHERS.

HOMES FOR THE AGED.

PUBLIC attention has been recently directed to an alleged "Shelter for the Aged," conducted by a Mrs. Hazeltine, on Vine street, Philadelphia. The Health Office sent an inspector to examine the "home," who found a singular state of affairs. The house contained fourteen small rooms, of which eleven were utilized as bed-rooms. These contained thirty-three beds, all said to be occupied. Some of the rooms had no heating appliances, and could not be considered habitable for the aged inmates in cold weather. As the only rooms unoccupied with beds were the front parlor, dining-room and kitchen, the inmates were obliged to occupy the same rooms by day and by night, thus giving no opportunity for airing. For this large family of both sexes there was but one toilet-room, with one bath-tub (not in use), one wash-stand, and one water-closet. There was another water-closet in the yard, that required emptying. The yard was filthy from the dish-water thrown out. The furniture was of the most wretched description, some of the old and decrepid persons sleeping on rickety wooden cots, and others on beds made up on the floor. The bedding and other belongings

had the dingy appearance only acquired by long estrangement from the wash-tub; the carpets could not have survived a vigorous onslaught with the broom. The offensive odor caused by this state of affairs, and by the lack of ventilation consequent upon deficient heating, was very decided. The place was pronounced a nuisance, and ordered to be abated within a week.

The Home for Aged and Indigent Widows and Single Women, now located in West Philadelphia, receives aged women on payment of a fixed sum (we believe it is now \$300), and the execution of an instrument by which all the property possessed by the applicant, or of which she might become possessor after her admission, is transferred to the institution. In return, the Home undertakes to provide for the woman for the remainder of her life. As this is a charitable institution, not operated with the hope of profit, it is to be presumed that the inmates receive as good treatment as is usual in public institutions. But the case is altogether different when a hospital of this description is operated as a private enterprise.

When people make a business of any matter, it is to be supposed that they carry it on upon business principles. And these are the same as they have been in all time, since the first barter was made by primeval man. An ancient mind-reader arose in the market-place of Carthage, and cried aloud: "Oh, men of Carthage, know ye that I am able to tell the thought that is first in the mind of each man among you?" And when they asked for the proof, he replied: "Oh, men of Carthage, the thought that is first in the mind of each of you, is that you may buy cheap and sell dear." When this universal business law is applied to the business of caring for old people, it assumes an aspect repugnant to the common sense of humanity. The proprietors of these so called "homes" do not accept an applicant unless they consider him unlikely to live long enough to eat up the sum received with him. If he dies sooner, they are that much better off. If he lives longer, they have made a bad bargain. In other words, a premium is put upon such usage as tends to shorten life, and upon the neglect of such cares as lengthen it. When it is considered that the persons who are sent to these "homes" are only those whose friends desire to relieve themselves of the trouble of caring for them, it is evident at once that no regrets will be shown on their death—"no questions asked." For these reasons, we claim that the care of aged people in this way is not a legitimate business for private individuals, and should be made unlawful. When a weekly board is paid, the interests of the care-takers are in the prolongation of the life of their charge, and good treatment may be reasonably expected. In the case of the Hazeltine Home, the accommodations could not compare with those to be had at the Alms-house. As to the food, nothing could be learned by a single visit of inspection; in fact, not a particle of food was visible at the time; but if private information can be trusted, the food supplied is such as could be expected with the general mismanagement of the institution as herein depicted.

Annotations.

DR. W. D. BIDWELL, is improving at Aiken, and expects to return to his home in Washington in about two weeks. We trust that our readers will have a paper from Dr. Bidwell in the coming "Tuberculosis Number." Dr. Shade has placed in our hands a paper giving further details of his "Mineral Treatment" of tuberculosis.

IN addition to the special numbers now in preparation, we desire to devote one number to "The Mountain Regions of Pennsylvania as Summer Residences for Invalids." For this we ask for reports from our readers in that section, giving such information as will be of use to the physician who desires to send patients there; what classes are benefited by residence in each location, what cases not to send, hotel or other accommodations, cost of board, amusements, etc., etc.

DR. MARY A. DIXON-JONES has joined our staff, and is now preparing a special "Gynecological Number," to appear about the last of April. We have already in hand material for this number, which enables us to inform our readers that it will be of unusual excellence, both as to the quality of the matter and the high standing of the writers.

Dr. Jones will not be long in demonstrating that there are exceptions to the rule recently laid down by a correspondent, as to women physicians, and that there is at least one who is equally gifted as a practitioner, investigator and writer. We trust that this will encourage others of her sex to show that, if they rarely appear in the pages of the journals, it is rather to be attributed to modesty than to any lack of ability. Our own position in regard to the women physicians is easily stated. It is simply: "Hats off! Front seats for the ladies," if they are pleased to honor us with their presence.

THE CHILDREN'S SEASHORE HOUSE AT ATLANTIC CITY.

THE report of this institution for 1891 states that 929 patients were admitted during that year. Of these, 750 were children, and 179 mothers. The aggregate number of days spent in the institution was 10,680; costing \$14,171.05. Of this amount \$4,705.70 was paid upon investment and betterments; \$474.50 for interest, leaving \$8,991.85 as the net cost for the year of operating, including repairs, rebuilding, insurance, etc. This makes a total cost of about eighty-four cents a day for each inmate.

Against this outlay, what a credit is to be made of health to the little sufferers. The average stay of the children was only twelve days, and the report states that 526 were discharged well, 201 improved, and but 17 unimproved. We trust that none of our readers will neglect any opportunity to put in a good word for this institution. The following notice has been sent out by the Managers:

"The Managers of the Children's Seashore House at Atlantic City desire to extend its benefits to the largest possible number of invalid children. With this object in view they offer to receive, free of charge during June, as many bed-ridden or crippled children from the hospitals, public institutions and private homes of our city and vicinity, as their institution will accommodate.

"Application for the admission of such children should be made in writing to the 'Physician in Charge of the Children's Seashore House.' Until June 1 his address will be 332 South Fifteenth street, Philadelphia, and after June 1, Atlantic City, N. J. Early application is desirable, and no child should be sent to the institution without previous application. The above offer does not include railroad fares.

"Railway tickets are sold to patients coming to the institution at the rate of twenty-five cents for children and fifty cents for adults, each way. These can be obtained only by means of the requisitions upon the ticket agents, which are always furnished with the orders for admission."

Letters to the Editor.

AN "OBSTETRICAL NUMBER."

I WOULD be pleased to see an entire number of your journal devoted to the management of labor; cases of labor where there is plain sailing; social hints as to the conduct and behavior of medical attendants; little points—socially, that would be of service to the young practitioner, as well as those who are older; how to meet accidents of a minor nature, etc.

I see you mention "Obstetrical Accidents." This is well, but hints as to the general social conduct will add to the value of such a number of your journal. Much depends upon the personal conduct and behavior of the medical attendant in the lying-in room. Quite often the success or the failure of the practitioner may hinge upon his being agreeable and acceptable to those who are present in the lying-in room.

CHARLES N. B. KENNEDY, M.D.

EBENSBURG, PA.

[We trust that our readers will write fully as to what topics they wish to have specially discussed, and that they contribute to their discussion.]

SCHNEIDERIAN HYPERTROPHY.

CAN you advise anything to aid my case? I am forty-five years of age, and suffering from a hypertrophied condition of the right nostril. The turbinated bodies sometimes swell up preventing all breathing. At all times the past year 'breathing through this has been very slight; respiration almost nil. Of course, if I could conveniently go to Chicago, I suppose by burning out a passage, I could get relief. I find I cannot do this just now. W. J. N.

[Apply a weak solution of chromic acid, gradually increased if not followed by too much irritation. If this is not well borne, deplete the turgid tissues by frequent applications of pure, water-free glycerine. When the swelling has been reduced, or if both agents irritate too much, apply fluid petrolatum several times daily.—W. F. W.]

The Medical Digest.

IRIS VERSICOLOR.—Physiologically, iris acts upon the gastro-intestinal canal, the glandular, and nervous systems. It powerfully excites the biliary, salivary, and pancreatic secretions. Upon the gastro-intestinal tract it acts violently, causing acid vomiting, frequent hydragogue catharsis, with intestinal burning and severe colic. Animals, after death from its inhibition, show marked congestion of the gastric and in-

testinal tissues. By its action upon the nervous system, it has produced neuralgia of the face, head and extremities. Iris salivates, but without injury to the gums and teeth.

Therapeutically, this agent is alterative and cholagogue. It is one of our best agents to influence the processes of waste and repair. It exerts a powerful catalytic action upon the lymphatic glandular system, and the ductless glands, as well as the liver, pancreas and kidneys. In cachectic states of the system, bad blood, scrofula, "mercurial" diseases, it does excellent service; and in secondary syphilis, with cerebral disturbances, and copper-colored dermal pigmentation, it is one of the best drugs we possess.

Upon the liver its action is marked. In that unpleasant condition known as "biliousness" it is prompt and efficient, and as a remedy for bilious headache, accompanied by nausea and vomiting of bitter ingesta, or in sick headache dependent upon indigestion, it is unsurpassed. In chronic hepatitis, and other hepatic disorders, with constipation, and sharp-cutting pains increased by motion, iris may be given alone, or may be advantageously combined with other hepatics. Duodenal catarrh, with jaundice and clay-colored stools, indicating a lack of biliary secretion, is cured by iris, and it is likewise valuable in constipation dependent upon biliary and intestinal torpor. Minute doses of iris allay gastric irritation, being valuable in cholera infantum and cholera morbus.

R.—Tinct. iris..... gtt. v.
Aque..... ʒiv.

Teaspoonful every hour.

In diarrhoea and dysentery, with large, slimy evacuations:

R.—Tinct. iris..... gtt. xv.
Aque..... ʒiv.

Teaspoonful every hour.

Iris is specifically indicated in soft glandular enlargements. It is one of the very few reliable drugs used for the cure of goitre, or enlarged thyroid. Indeed, for this condition it is our most direct and effectual remedy, whether the enlargement be constant or whether it be simply a fullness due to menstrual irregularities. Further, it has a marked influence for good on the ovarian and uterine disturbances giving rise to this fullness. In goitre apply a cotton cloth saturated with specific tinct. iris, and give internally a teaspoonful, three times a day, of a mixture of specific tinct. iris, ʒss., aqua ʒiv. Basedow's disease (exophthalmic goitre), in the early stage has been cured by iris; Addison's disease of the suprarenal capsules has been greatly improved, though not cured by it. In chronic affections of the pancreas, with a sodden, leaden colored tongue, and in chronic splenic diseases, when the skin is blanched (as in leucocythemia), this drug is indicated. Chronic renal diseases, ascites, anasarca, hydrothorax, and hydropericardium, have yielded to its curative powers. In dropsy it is administered in cathartic doses. It is seldom used at present as a cathartic; but when so used its harsh effects may be somewhat overcome by combining it with ginger, piperin, or camphor.

As a remedy for uterine hypertrophy, enlarged ovaries, ulcerated os and cervix uteri, uterine leucorrhoea, and dysmenorrhoea:

R.—Tinct. iris..... gtt. x. to xx.
Aque..... ʒiv.

Teaspoonful every hour in acute trouble, and four times a day in chronic affections.

It is all the more strongly indicated in these conditions, if there be impaired general health, with mental depression, and when the skin presents abnormal pigmentation.

This drug has been successfully used in chronic rheumatism, syphilitic rheumatism, spermatorrhoea, and prostaticorrhoea. Prof. Scudder, in his "Practice," states that he has for years placed great reliance on iris in treating syphilitic iritis. It is very efficient in malarial jaundice, intermittent and bilious remittent fever. It is rendered more efficient in malarial disorders when combined with euonymus or alstonia constricta. Iridin, in three-grain pill, every night, followed by a saline cathartic in the morning, was quite popular among Edinburgh physicians a few years ago as a remedy for the vomiting of pregnancy.

Iris is of great utility in dermal practice, given alone, or associated with other indicated remedies. It seems to have a better action in chronic conditions. It is particularly adapted to diseases involving the sebaceous glands, and is especially useful in comedones, and other eruptions common to youth. It is indicated by rough, greasy, discolored conditions of the skin, and in those cases where pustular eruption seems to be associated with functional disturbances of the reproductive apparatus; also when associated with thyroid fullness in the female. It is valuable in syphilitic skin diseases. I have used it beneficially in eczema rubrum of children, and in cases of eczema of the scalp in adults. Some cases are benefited only, not cured by it. In one case of thirteen years' standing the unpleasant symptoms were subdued as long as the patient took the drug; as soon as the iris was withdrawn the unpleasantness returned, though the general health of the man was much improved by its administration. Herpes zoster and præputialis usually call for iris and rhus. Rupia and impetigo have been cured by it when associated with sulphur or Fowler's solution. Persistent prurigo, psoriasis, and acne indurata will usually present conditions calling for iris. For lepra:

R.—Tinc. iris. 3j. to 3ij.

Aque. 3iv.

Teaspoonful four times a day.

The system should first be prepared by sulphur, or the sulphites, compound tonic mixture, or acid solution of iron, if debilitated. Other remedies may be associated with iris in chronic skin diseases when indicated, as alnus, apls, phytolacca, or rhus tox.

The specific indications for iris may be stated as fullness of thyroid gland; enlarged spleen; chronic hepatic complaints, with sharp, cutting pain, aggravated by motion; enlarged lymphatics, soft and yielding rough, greasy conditions of the skin; disorders of sebaceous follicles; abnormal dermal pigmentation; menstrual wrongs, with thyroid fullness; muscular atrophy, and other wastings of the tissues; bad blood. The dose of iris should range from one-tenth drop to ten drops, according to the conditions present. The remedy is not appreciated as it should be, but it is safe to say that with a reliable preparation it will grow in favor the more it is employed.

—Medical Gleaner.

WHITEHEAD'S OPERATION FOR HEMORRHOIDS.—The results as obtained by Whitehead, could not be better than have been obtained by hundreds with the ligature. The idea advanced that the great danger in the use of the ligature lies in the fact that septic infection is likely to follow is chimerical. As the tissue

of this well formed tumor is gone through by the ligature, a healthy granulating surface is left which resists all septic invasion. If this were not so, why is it that authors are able to report thousands of operations for hemorrhoids by the ligature without the least semblance of sepsis?

I had the honor to report to this association, at Cincinnati, 1,000 operations for hemorrhoids by the ligature without a single death or a case of septic infection. After an experience in operating for this affection for fifteen years, I have never operated on the same patient the second time, have never tied a vessel during the operation. That it is simpler than Whitehead's cannot be denied. That it is as free from danger is borne out by facts. After a fair trial of Whitehead's operation, I am forced to conclude:

1. That the operation meets the demand in but few cases.

2. When it is considered that a large proportion of subjects are unable to take an anæsthetic, that some danger always is risked in giving an anæsthetic, other methods simpler in execution and freer from danger can be practised without the use of an anæsthetic, and should be preferred.

3. As a full and complete paralysis of the sphincter muscles is necessary to the operation, great risk would be assumed in many cases. Other methods of cure would not necessitate this procedure.

4. In that large blood-vessels have to be divided, and the rectum a difficult place to secure arteries, the operation is in consequence a "bloody, difficult, and tedious one."

5. If union by first intention does not take place, as in strumous or other diathesis, the wound would be a large suppurating one, and sepsis invited.

6. The operation is not considered complete unless the whole of the hemorrhoidal plexus is removed. I submit that this involves an unnecessary amount of surgery, and that the author's conclusions for such recommendation are based upon a wrong premise.

7. In view of the fact that the vessels are tied or twisted during the operation, and that the parts are in a diseased state, secondary hemorrhage could be easily induced, and is a dangerous condition, especially in the rectum.—Mathews, *N. E. Med. Monthly*.

A CHAPTER OF ECLECTIC MEDICATION.—Spinal Remedies: Ustilago Maidis.—In last issue I called attention to the relationship between this and ergot, without attempting a differential "diagnosis." The ustilago is not so powerful in its action, but reaches chronic cases better. When there is relaxation of the pelvic structures, thickened, sodden, with a mucous or muco-purulent secretion, we may think of ustilago. The same condition extends to the bladder, and even to the kidneys, and this will be a remedy. I am not sure but that the influence is as direct upon the urine as upon the urinary apparatus. I think in both cases the wrongs may be traced to a spinal innervation which is enfeebled. There are other lesions of a similar character which may be studied in this relation.

Sticta Pulmonaria.—We may study sticta as a remedy which influences the respiratory apparatus, and also as an anti-rheumatic. The indicating symptoms show their influence through the spinal cord. You probably remember them—"pain in the back of the neck, extending to the occiput, and down to the shoulders." The posterior spinal nerves are those which show the pain, and I have seen it down to the sacrum and pelvis, and I am satisfied that this dis-

ordered innervation is part of many diseases, and sticta is a good remedy to think of.

Veratrum.—When the circulation of the spinal center is active (hyperæmia) there is no better remedy than veratrum in small doses. Even in paralysis it may be better than the stimulants and tetanics usually employed. A phase of disordered spinal innervation with defective secretion is better reached by veratrum than by other remedies, so that Professor Howe used to remark: "I believe veratrum is the best alternative in the materia medica," and he used it then as he used acid iron of late, week about with Fowler's solution.

Iron.—One of the straight symptoms indicating iron is the pain in the occiput and neck, and I believe it directly influences spinal innervation, strengthening it. Some one may say it is because it is a blood maker, but I think the action direct. I have treated infantile paralysis with tincture of muriate of iron alone, or with quinine inunction, with excellent results. And I remember a case treated by a neighbor with acid iron and syrup of the phosphates with excellent success.

Arsenic.—Whilst arsenic may have an influence more directly upon the sympathetic, I know that it influences spinal innervation. Its poisonous action is very decided upon the nerve-centers, and I believe when it is curative it is especially through the nerve-centers. The only positive indication for arsenic that I ever found was the *inelastic skin*, showing failure of spinal innervation.

Phosphorus.—It is customary to study phosphorus as a blood maker or restorative, but I want to notice it in this connection as it has a direct influence as a stimulant to spinal innervation. This depends partly because it favors nutrition of the nerve-centers, but its action is still more direct. There is a case of atony in paralysis in which phosphorus is a direct remedy. In slow infantile paralysis it is one of the best we have. In muscular feebleness for want of innervation it is good. In want of sexual power or sexual appetite it is a good remedy, if the trouble is in the nervous system. Whatever the distant manifestation of disease, there will be a sense of weakness in the back, coldness, heaviness, weight, and sensibility over the spine is diminished. The tincture of phosphorus, phosphorus pills, or the phosphates or hypophosphites may be employed.

Iodine.—In small doses iodine is a stimulant to spinal innervation, and the indications are very similar to those for phosphorus. I have used it in partial paralysis, alone, and in combination or alternation with nux, and it has been a favorite remedy in sexual feebleness. I always give it in substance, the dose being from $\frac{1}{4}$ to 1 grain in pill form.

In practice I regard the pneumogastric as a spinal nerve, the medulla being an expansion of the cord. In diseases of the respiratory organs I think it well to study spinal innervation closely, and I have wondered whether the good action of phosphorus and iodine in pneumonia and other diseases was not in this direction. It is worth thinking of.

Collinsonia.—Whether the large dose influences the spinal cord or not, I know that the dose of one drop does. The striking indication is sense of constriction at the orifices of the body, and whenever I find this, whether of mouth, nose, urethra, or anus, I should think of collinsonia as a probable remedy. You remember it as a remedy in hemorrhoids, where there is a sense of painful constriction and pinching, as if a burr or foreign body was caught. It is the remedy in irritable larynx, with similar sensations—foreign sub-

stances. It is a remedy in dyspepsia with constriction of the lips, so that they sometimes fissure. But, as I have said before, where the symptomatology is straight, the remedy will fit any disease.

Hamamelis.—Reverse the picture of collinsonia, and you have the indications for hamamelis—the orifices are relaxed, and there is not spinal innervation for muscular support. Just how far it may be profitable to work out the anatomy and physiology of the connection between the cord and the sympathetic you may determine; but it is a profitable as well as interesting study. This inter-communication is most intimate, and I believe that spinal innervation is felt throughout the entire economy. What we regard as wholly sympathetic innervation is most certainly dual. If one will read the wrapper of "Pond Extract" in this light, he will see how it "may have been useful" in so many diseases.

There is a long list of analogous remedies that might be noticed here, but I do not think it would be profitable.

Nitro-glycerine—Glonoine.—The transition from a simple and mild to such a powerful remedy as this is sudden and impressive. If we think of it as a most powerful depression of spinal and sympathetic innervation, we will hardly go wrong in its administration. To think of it as a stimulant to the circulation or respiration is a very grave mistake. It is useful in arterial or cardiac spasm (tonic contractions), that intense asthma which stops respiration, laryngeal spasm, and gastric spasm. Angina pectoris in its different phases gives the cases where it has been employed.

The remedy is too dangerous to use undiluted. Two solutions are made— $\frac{1}{100}$ and $\frac{1}{10}$. Of the first which should be preferred, the dose is one or two drops.

Nitrite of Amyl.—This is one of the most powerful depressants of spinal innervation known, though it may be that in very minute doses it would be stimulant to the vaso-motor nerves. Its principal use has been in cardiac and respiratory spasm, where it would seem as if life would stop from this cause. In asthma it sometimes gives immediate relief. It has given relief in tetanus and strychnine poisoning, and in hysterical convulsions.

The nitrate is put up in small glass pearls or tears, containing two to ten drops, which, crushed in a handkerchief, the remedy is inhaled.

Phystostigma.—Though the principal use of the calabar-bean has been by the oculist, it also has a general use in medicine. It is a powerful spinal sedative, relaxing the capillaries, and diminishing the circulation in the nerve-centers. It is the opposite of belladonna and atropia, and may be used as an antidote to their over-action (which is the use of the oculist). It is a remedy in tetanus and in poisoning from strychnine. In epilepsy and convulsions, if there is evidence of active hyperæmia of the cord, it is a good remedy. I used it in a case of puerperal convulsions, where other remedies had failed, with marked success.

The dose of the extract will be from the $\frac{1}{10}$ to the $\frac{1}{2}$ of a grain: of a good tincture, from 1 to 10 drops.

Lobelia.—Whilst lobelia will be studied elsewhere, it should be looked at in this connection, for its influence upon spinal innervation is direct and marked. You remember the indication for it—a sense of fullness, whether of stomach and bowels, lungs, tissues in general, or, if we feel it, as in the full oppressed pulse. It is the old remedy for convulsions, a remedy for asthma, for hysterics. It is an obstetrical remedy in

rigidity of the os or perineum, the tissue being thick—full. The indications are so sharp and distinctive that one can hardly go astray, whether the dose is large for emesis, or small for other purposes.

Bromide of Ammonium.—This is a stimulant to spinal innervation, and at the same time an antispasmodic. It is usually regarded as the same as bromide of potassium, but in fact it is very different—the one being stimulant, the other sedative. In a large number of cases of convulsion, epilepsy, and hysteria, there is atony of the cord, and bromide of ammonia stands first among remedies. I have always depended upon it, especially to prevent convulsions, and for administration after they had been controlled by other means.

Morphine Hypodermically.—The action of morphine upon the cord is best studied in puerperal convulsions, where it stands first among remedies. The perverted innervation is a reflex from the uterus, and one can not determine in most cases whether there is anæmia or hyperæmia of the center. It may be that relief of the peripheral irritation is its action, but I believe that its action is direct upon the spinal center. A hypodermic injection of $\frac{1}{3}$ to $\frac{1}{2}$ grain arrests the convulsion.

It may be noticed that when the pains are intense but not effective, a small dose of morphine will quiet the pain for a time, and after a period of rest the pains will become normal, and the labor will progress normally.

Hot Water.—Cold Water.—Much benefit may be obtained from the use of water, both hot and cold, in many forms of disease with impaired spinal innervation. You would hardly suppose it, yet the action of heat and cold is nearly the same. We use hot sponging as a direct stimulant, and cold sponging for the stimulus of reaction.

Counter-irritation.—We employ these agencies for direct stimulation—as hot water, hot fomentations, hot salt, stimulant liniments, sinapisms; or for revulsion, as in the case of thapsia, croton oil, the blister, the irritating plaster. If the physician has determined clearly what he wants to accomplish, these remedies may be selected with advantage in many cases.

Belladonna Plaster.—Strengthening Plasters.—Do not say *pooh!* it is all humbug; for there is something in it, or people would not stick to them as they do. A belladonna plaster gives the topical and general action of belladonna. It stimulates the capillary circulation of the cord, and thus improves innervation. I have known it to speedily relieve a diabetes insipidus, and with general means cure it; and I have seen bad results where it was misapplied.

The old-fashioned "Beach's Strengthening Plaster," which may be taken as the type of the gently stimulating resin or pitch plaster, is useful in some cases of weak back, and functions supplied with nerves from this weak back are improved.

The Spinal Ice-bag.—A sharp means of stimulation in cases of extreme (acute) exhaustion of spinal innervation may be obtained by the application of ice over the spine. In an emergency (and these are the cases) an ice bag may be improvised of almost any material which will hold a lump of ice—a cloth, a towel, a piece of rubber or oil-cloth, or even a paper bag. It is passed rapidly over the part, backward and forward, until we see the result. I have seen the apparently dying brought back to life, and respiration and circulation re-established. Even in algid cholera I have had such results.—*Eclectic Med. Jour.*

M. FERRAND (Paris Academy of Medicine) concludes that glycerine given by the stomach is absorbed unchanged by means of the lymphatics, especially by those passing between the stomach and the hilum of the liver and the gall bladder; it is a powerful cholagogue and a valuable remedy in hepatic colic; in relatively large doses, it brings an attack to an end (20 to 30 grammes); glycerine taken every day in a little alkaline water prevents fresh attacks, and, without being a lithontriptic, glycerine is the remedy *par excellence* for biliary lithiasis.—*Brit. Med. Journal.*

PROFESSOR CARL CREDE, of Leipsic, who died last week was a great benefactor of mankind, for it was he who introduced the simple method now universally practised of preventing blennorrhœa in new-born infants. He was also the inventor of a manipulation in delivery which bears his name (der Credé'sche Handgriff). The more important of his writings are "De Omphali Proptosi," "Clinical Lectures on Midwifery," "The Prussian Midwives and their Relation to the State and to Obstetrics," "The Prevention of Inflammation of the Eyes in New-born Infants," "Manual of Midwifery," and "Healthy and Sick Lying-in Women." Along with Spiegelberg and Gusserow, he edited the "Contributions to Midwifery." He was born in Berlin in 1819, was appointed professor in Leipsic in 1856, and taught there till 1887.—*Lancet.*

DENTISTS: A NECESSITY, NOT A LUXURY.—Dentistry is undoubtedly the most useful and the most reputed of the departments of specialized surgery. The idea that the care of the teeth might safely be confided to the extractive mercies of the family medical attendant has long since been exploded, and of late years people of the middle classes of society have more and more availed themselves of the services of the skilled dentist. As a nation, we are still far behind our Transatlantic cousins in the amount of attention and care bestowed on the beautification and conservation of the teeth, but year by year the prophylactic value of the dentist's skill is becoming more widely appreciated. At the last meeting of the Board of Management it was decided to appoint a paid dentist to attend to the teeth of the children in the Hanwell Parochial Schools, and few persons will be disposed to find fault with an innovation so conducive to comfort and health. There still survives an impression that a dentist is a luxury, but it is not so long since that the importance of attending to the eyesight of school children has come to be generally recognized. The dentist will probably do more to procure relief from suffering and to promote health than even the optician, and we cannot but applaud the new departure.—*Med. Press and Circular.*

FOR CORYZA.—Dr. J. A. Wegg (Spanish Town, Jamaica), writes: I have found in my own case, likewise of my friends and a few patients, that natural salicylic acid used as an errhine was a reliable agent in arresting a fresh cold-coryza. Personally I used it in London, the United States, and Jamaica with uniformly good success under such circumstances. A few grammes, say two or three, of the salt dry are placed into an ordinary paper pill-box, in the cover of which three small holes are bored. Shake up the contents immediately before snuffing and continue doing so until sternutation is produced. The process to be repeated according to circumstances or the

amount of hyperæmia of the S. membrane. The sufferer may put the small box in his coat-pocket and so relieve himself anywhere of any return of his discomfort.—*Brit. Med. Jour.*

SURGICAL TREATMENT OF PULMONARY GANGRENE.—C. Périer (*Sem. Méd.*, March 16, 1892), reports the case of a man, aged 58, suffering with a gangrenous patch in the left lung. Treatment by antiseptics, etc., used *per vias naturales*, having proved ineffectual, Périer cut through the chest wall at the level of the second intercostal space on the left side, and incised the pleura and lung; about two centimeters of healthy lung tissue had to be traversed before the seat of the disease was reached. The gangrenous focus, which was estimated to have a capacity of about 60 cubic centimeters, was carefully cleansed with cotton wool steeped in a 1 in 100 solution of chloral, and its surface touched with camphorated naphthol; two drain tubes were placed side by side in the wound and fixed to the skin, the edges of the wound being brought together on each side of the tubes. The operation was performed on December 25, 1891; one tube was taken out January 10, 1892, and the other on January 14. On February 9, the fistula was completely closed. At the date of the report of the case to the Académie de Médecine on March 15, the patient's health was perfect; there was neither cough nor expectoration, nor could any evidence of pulmonary disease be detected with the stethoscope.

DEMME (*Bericht des Jennérschen Kindersp.*, in Bern) remarks that a very serious degree of anæmia may be produced by the presence of ascarides. When there is reason to suspect the presence of the parasites he gives a third of a grain of santonin in a teaspoonful of warm, sweetened olive oil in the morning. In treating the condition, however, he combines calomel with santonin, as he believes that the latter drug may fail to lead to the expulsion of the worms. He orders a sixth to a third of a grain of santonin combined with a third of a grain of calomel to be taken at 6, 7, and 8 A.M., on three mornings. He met with one instance of santonin poisoning. A boy, aged three years, was given by his mother, during three days, fifteen tablets, each containing one-third of a grain. The symptoms were vomiting, dilatation of the pupil, collapse, cyanosis, dyspnoea, and, finally, convulsions. After a warm bath, with cold affusions to the head and spine, consciousness returned. The temperature was 103.5°, epistaxis and hæmoglobinuria occurred, and a scarlatini-form eruption was noticed. The child ultimately recovered, but Demme points out that serious symptoms have arisen after much smaller doses, and recommends that the doses given to children, from one to six years old, should not exceed gr. 1-6 to gr. ½ in each dose, or a grain to a grain and a half in the day.

CHLORALAMIDE.—ITS ACTION BASED ON A STUDY OF TWO HUNDRED AND EIGHTY CASES.—In giving an opinion of the value of a drug, and in this case of a hypnotic, it is necessary to be particularly careful, as there are so many known and unknown factors which combine to produce the somniferous state, that it is often difficult to determine which adverse element to its enjoyment is antagonized by the medication used. Again, the organism may be abnormally susceptible to or against certain physical agents, so that we have in different conditions different procedures in accomplishing a state of physical and mental relaxa-

tions at our command. These may be drugs, different temperatures, electricity, or even suggestion.

The compound which is the subject of this paper acts by virtue of its power to quiet the irritability, normal or otherwise, of certain nervous centers, and induce a condition which we term sleep.

Chloralamide, or more properly chloralformamide, is, therefore, a pure hypnotic. The drug is a chemical union of chloral anhydride with formamide. It is soluble in water (10-14 parts) and alcohol (1-1½ parts).

When introduced into the alimentary canal it is quickly absorbed and passes into the general circulation where it is gradually broken up with the liberation of chloral. The existence of free chloral in the organism would, if in sufficient quantities to produce hypnotic effects, lower the cardiac and respiratory action by direct effect on the ganglia governing these functions, which is not to be desired in many cases. When in combination with the formamide, as in this drug chloralamide, these functions of the medulla are stimulated, and the depressing influences of chloral counteracted.

The effects of this drug on the nervous system other than the production of cerebral anæmia—sleep, and the lessening of irritations to a certain degree, are practically *nil*.

Its influence on respiration is decided. In ordinary doses it stimulates the respiratory center and greatly depresses it in toxic quantities—death resulting from paralysis of respiration and not from cardiac failure as in chloral poisoning.

The sphygmographic tracings show that the blood pressure practically remains uninfluenced except just before death, when it is diminished about nine-tenths of the total pressure; this seems to be from cardiac enfeeblement rather than from any influence on the vaso-motor system.

Slight influence, if any, is exerted on digestion, temperature, appetite or secretion of urine.

The chief therapeutic indication for the employment of this drug is in diseases, organic and functional, where hypnotics are required for insomnia, except when it is the result of great mental excitement or pain, and even in these cases it will often ameliorate the condition. It is especially useful in the insomnia from high arterial tension in Bright's diseases. Its range of usefulness is therefore very large, for insomnia is a very distressing symptom of a large number of disease-processes.

Its stimulating effect on respiration would specially indicate its use for the night-sweats of phthisis. The depression following this condition does not seem to be due to the sweating *per se*, but rather to the effects of a gradual increase in the quantity of carbonic acid gas in the blood incident to the difficult interchange of gases from the pulmonary lesion. In phthisis, when the daily exertion from excessive coughing or other physical causes more than exceeds the supply of energy and nutrition which can be furnished by the body, the respiratory centers are greatly depressed, and not so quickly stimulated by a quantity of carbonic acid gas in the blood which ordinarily would effect them. The sweat centers are not affected by the physical causes, and respond to the stimulation of the increased amount of carbonic acid and pour forth their secretions abundantly. A respiratory stimulant would combat this functional perversion, and as this kind of a therapeutic agent we can recommend chloralamide.

When the drug is given for its hypnotic effect, its physiological action is noticed in from thirty to ninety

minutes, and the sleep induced lasts from five to nine hours, is natural and refreshing and not followed by any unpleasant sequelæ. No symptoms of cerebral congestion or any unpleasant sensation in the head or other parts of the body are experienced. No evil effects followed the continued use of the drug for ten days, and during this time it was not necessary to increase the dose, nor was its hypnotic effect diminished. Any psychological influences can therefore be eliminated. There is no cumulative action of the drug, nor are there any cases on record of where a habit has been formed. The best time for administering the drug is just before retiring. It can be given in capsule, dry on the tongue, as an enema, or preferably in solution. As palatable a combination as one could wish is the following, which will be found useful in private practice. It is a pleasant mixture with a slightly acid taste.

R.—Chloralamide..... ʒij.
Tr. cardamom. co..... ʒi.
Misce bene et adde :
Syr. aurantii,
Syr. rubi idæi..... āā ʒss.
M.—S. Sig. From ½ to 1 tablespoonful repeated.

The dose which yields the best result is from 30 to 45 grains. Not more than 100 grains should be given in twenty-four hours.

The conclusions based upon its use in two hundred and eighty cases are briefly, as follows :

That it is a most useful hypnotic, reliable, safe and pleasant.

That it has a place as an anhidrotic in phthisis.

That it is superior to other drugs because in hypnotic doses it stimulates respiration, and but slightly, if at all, influences pulse, temperature, or urinary secretion.

That no collateral symptoms of any consequence exist.

That the best hypnotic dose for an adult is 40 grains.

That it is given preferably in an alcoholic solution just before retiring.—Wood, *Brooklyn Med. Jour.*

NOTES ON THE TREATMENT OF METRORRHAGIA (by Prof. Arthur W. Edis, M.D., London).—If albuminuria be present, or the kidneys seem to be at fault, encourage vicarious action of the skin and bowels by means of diaphoretics and purgatives, and treat the case upon its general merits.

The reliable remedies at our disposal for checking or arresting uterine hemorrhage are really very few. Ergot is unquestionably one of our most potent; combined with strychnine and cinchona, its effect is often more evident. Whether given as liquid extract, infusion, ergotin in pill, or hypodermically, will depend upon individual experience and other circumstances.

Hydrastis canadensis is a valuable agent in many cases of fibroid, and is an agent apparently too little known.

Hamamelis or hazeline is useful in some cases. The ordinary astringents, such as gallic and sulphuric acid, have really very little influence in restraining hemorrhage, and are far too often relied upon. Quinine and strychnine, alone or in combination, will often succeed in checking or arresting hemorrhage in those cases where the system is much depressed from repeated or prolonged losses. Bromide of potassium in cases of hemorrhagic chlorosis, ovarian irritation, and even in hæmatocele, possesses the power of checking hemorrhage equal, if not superior, to that of any remedy we possess. Chlorate of potass and borax in combination with ergot are highly spoken

of by some. *Cannabis indica* has also its advocates.

Where the loss has been very severe or protracted, opium has a wonderful restorative effect. Given in combination with quinine or cinchona the benefit seems to be enhanced. The administration of iron should not, as a rule, be resorted to when any foreign body is suspected to be present in the interior of the uterus. It often serves to intensify the loss, and aggravates materially the condition of the patient. It is of much benefit in those cases of hemorrhage where, from antecedent anæmia, the blood has become so attenuated as to pass readily through the capillaries, and in certain cases of profuse loss from the presence of intramural fibroids.

As regards local remedies, the hot vaginal douche, at a temperature of 110° F. to 115°, is often of service. Absolute rest in the horizontal position, preferably in bed, is indicated in all severe cases. The application of carbolic acid on a Playfair's probe to the cervical canal, and even the cavity of the uterus, in suitable cases, may check hemorrhage for a time. I have even seen instances where free scarification of the cervix uteri, by lessening uterine congestion, succeeded in arresting hemorrhage where ergot was useless. Where uterine hemorrhage persists, no assignable cause for it—such as malignant disease of the cervix, fibroid, inversion, or pelvic hæmatocele—being detected, and ordinary remedies have been tried and failed, we should, without further delay, dilate the cervix and explore the interior of the uterus.

Numerous instances have been recorded of patients dying from uncontrollable hemorrhage where a *post mortem* examination revealed the existence of some intra-uterine growth, such as a polypus or submucous fibroid, retained product of conception or fungoid condition of the endometrium, which could readily have been removed had appropriate measures been adopted in time, and the patient's life thus saved. Plugging the vagina is a very useless and unscientific procedure, and should never be relied upon. The mere fact of inserting a laminaria or carbolized sponge-tent into the cervix uteri arrests the hemorrhage for the time being, and facilitates subsequent exploration of the uterine cavity. As to any risk of reflux through the fallopian tubes, it is merely visionary, provided, of course, only appropriate cases are selected.—*Brit. Med. Jour.*

DR. JACQUES (*Rev. des Maladies de l'Enfance*) says that gargles are the most effectual method of bringing remedies into contact with the false membranes of diphtheria without running any danger of injury. He gives the preference to perchloride of iron, on the ground that it is astringent, hæmostatic, and antiseptic. He prescribes a gargle with glycerine and water, and asserts that any child over six or seven years old ought to be capable of being taught to gargle. Immediately after gargling, he washes out the mouth with a large quantity of a 3 per cent. solution of boric acid. This is done not only to remove the unpleasant taste of the iron, but also to wash away particles of secretion or false membrane partially detached by the gargling; the washing is done with an irrigator, and may extend to the nasal cavities. At first the patient gargles every hour—one hour with the perchloride of iron gargle, the other with a gargle containing 2 grains of carbolic acid to ʒiss of water with glycerine π lx. As food, he prefers milk, but insists that no milk should be allowed to remain in the mouth; therefore, immediately after the milk he gives a drink of wine and water, or spirit and water. If the child cannot be induced to gargle,

Jacques employs a spray of perchloride of iron, only every four hours, to avoid fatiguing the child, who resists, but the mouth may be washed with the irrigator every hour, since children do not, as a rule, object to it. In cases in which he has been able to apply this line of treatment before the onset of laryngeal symptoms, he has not seen this complication arise, but, he adds, that the total number of such cases was small.—*Med. Soc., St. Petersburg.*

A PROPOSED NEW GERMICIDE.—It is generally admitted that phthisis, cholera, typhoid, yellow and scarlet fevers, leprosy, lupus, erysipelas, malignant pustule, and other zymotic diseases, are largely due to the ravages of colonies of hostile bacilli and their poisonous products in the tissues or organs affected, and their presence can, in most instances, be readily demonstrated. They are found in the sputum and breath of phthisical subjects; in the dejections of cholera and typhoid; in the urine and vomit of yellow fever; in the blood and cast-off epidermis of scarlet fever; in the surface lesions of leprosy and lupus; in the pus of erysipelas and tuberculous fistula; in the vesicles of malignant pustule. In fact, each microbic disease carries its specific bacilli, and they are not found when the disease is not present. In the near future, it is to be hoped we may light on some reliable method of preventing their propagation and terminating their existence, for bacilli will cease to grow, even in an inviting medium, when confronted with a competent germicide. Some chemical agents, as salicylic acid, iodoform, corrosive sublimate, arsenious acid, and other substances, organic and inorganic, act as germ-destroyers; yet they cannot be used in sufficient quantity without injury to tissues, or danger to life. Moreover, salicylic acid and iodoform arrest the development of microbes, but do not readily kill them; corrosive sublimate and arsenious acid affect both objects, but are too dangerous in themselves; and no other germicides have yet proved practically efficient. Of late years, however, some curious combinations of organic bodies with inorganic elements have been produced, called organo-metalloid derivatives. They are analogous to other organic bodies, but they cannot enter into the composition of healthy tissues. Among their number is one called kakodylic acid, or dimethyl arsenic acid (Alkargen). It may be obtained by the distillation of dry acetate of potash with an equal quantity of arsenious acid, and exposure of the product to the slow action of air. Kakodyl, and its oxide, alkarsin, the "liquor de cadet" of the French, are horribly offensive, with an unbearable odor of concentrated garlic; but kakodylic acid is all but devoid of smell. It comes in the form of bright, colorless crystals, composed of carbon, hydrogen, and arsenic. It is acid in reaction, and deliquescent in moist air, but otherwise very stable. Until now, the products of kakodyl have been looked on as dangerous chemical curiosities, devoid of medicinal value; but, since the acid contains at least *fifty per cent.*, or more than *half its bulk*, of arsenic, and is nevertheless quite innocuous to man, its employment seems to me available, especially as a hypodermic injection, for the destruction of pathogenic germs. By this method, it would be at once carried into the torrent of the circulation, and quickly reach the desired parts; whereas the stomach is often unfit for the offices of absorption, digestion is disordered, and more or less of the remedy either passes through the intestines or is vitiated by the gastric secretions. Now it can be shown that kakodylic acid shares, in common with some hydro-carbons (as creosote and

naphthaline), the power of devitalizing micro-organisms; and thus it should be applicable, for instance, to the bacilli of "consumption," with the inestimable advantage of harmlessness to the individual. Arsenic, in any form, is inimical to fermentation, and destroys germ life; and even when internally administered, it displays a peculiar influence over chronic phthisis—a typical germ disease—lowering the temperature, raising the weight, and improving the respiration and general physical appearance. Hence its trial, by subcutaneous or parenchymatous injection, in a safe form, is here advocated. Should it not fulfill its promise in the treatment of phthisis and kindred affections, by these means, it may yet have its uses, as an internal or external agent, in psoriasis, lupus, pemphigus, and many parasitic and other affections of the skin; or it may prove serviceable in cancerous and malignant growths, by virtue of its germicidal action, or otherwise. Cancer is attributed by many high authorities to a specific bacillus or its products. The prolonged administration of arsenic in the usual forms is often accompanied or followed by erythematous, eczematous, or herpetic eruptions; by discoloration of the skin, and by a remarkable form of epithelial cancer. Possibly these effects would be obviated by the use of this substitute. Kakodylic acid is freely soluble in water, alcohol, glycerine, and other media, and I would suggest a solution holding 1 grain in a drachm of distilled water; 12 minims of this might be first used hypodermically, which would represent $\frac{1}{10}$ of a grain of arsenic. For internal administration, the Philadelphia Dosimetric Company, 2009 Arch street, carefully prepares granules of $\frac{1}{10}$ of a grain, representing $\frac{1}{10}$ of a grain of arsenic. These may be given in gradually-increasing numbers, for it is always wise to be cautious with a new agent. I hope, before long, to be able to show that kakodylic acid deserves recognition as a therapeutical antagonist to diseases dependent on microbes, or otherwise amenable to arsenical treatment.

—Louis Lewis, *Med. World.*

THE SIDE-SADDLE.—I will now call your attention to a factor in the production of lateral curvature which has not received the recognition which it deserves. I realize that I am open to criticism in my statement, but I believe that the side-saddle used by horsewomen is an important factor in the production of lateral curvature. But you say that horseback riding is said to be the best form of exercise. That is true, if you refer to it as taken by yourselves, but not when taken as woman, from the dictates of custom, is compelled to take it. On this young man, sitting in the position of a woman when occupying the side-saddle, I place this rod in the axis of the shoulders, and another in the axis of the pelvis. You will see that the two are in different planes. A rotation of the vertebrae always accompanies this twisting of the body. Certain muscles are placed at a disadvantage by the position which the patient assumes. However, before this position will produce a deformity, there must be a condition of preceding feebleness, and a persistent or frequent resort to the deforming position.

In recognition of the possibility of the side-saddle being injurious, there are in use side-saddles made with the horns on both sides, so that the rider can from time to time dismount and change sides. There are other side-saddles made with horns that are changeable, to facilitate the accomplishment of the same object and not have the unsightly horns on the side not in use so conspicuous. While this is a step in the right direction in at least the recognition of the

liability to produce deformity, it does not go far enough.

I will not permit patients with rotary lateral curvature to use the side-saddle at all, and being loath to deprive some of them of the exhilaration of this form of outdoor exercise, I have had recourse to the use of the bifurcated skirt. The principal objection to its use lies in its making the wearer more conspicuous, and it is therefore more difficult to have adopted in or near the city.

The method of riding astraddle, or in the man's saddle, is so entirely different that much of the previous instruction is useless, and riding must be learned all over. Patients who have adopted this method tell me that it is far more easily learned, that they feel safer, and have the consciousness of the horse's movements being freer, from the absence of the necessarily tight girths of the side saddle.

There has recently been introduced in this city a riding-school where instruction is given to girls and women wearing the bifurcated skirt, and I hope the time is not far distant when a rider with a bifurcated skirt will attract no more attention than a woman on a bicycle.—H. A. Wilson, in *Jour. Am. Med. Asso.*

EIGHT CASES OF FISSURE AND ULCER OF THE RECTUM, WITH REMARKS.—Since February 10, 1891, I have seen eight well-marked cases of fissure and ulcer of the rectum. And yet, in a practice of fourteen years, I can recall only eight or ten cases—previous to the above-mentioned eight—which I have diagnosed and treated as such. I am now perfectly satisfied, however, that during this period I have failed many times to discover the rectal lesion—one or the other, or both, as the cases may have been, for two reasons:

1. Unfortunately, I so often accepted the patient's diagnosis of his or her case, and directed a treatment for hemorrhoids.

2. When I did examine, it was not in a thorough and systematic manner, and I failed to discover the real cause of suffering. Not a few physicians could give the same reasons, as these eight cases will show.

There is very little literature on this subject in the books on surgery. I presume some works devoted especially to diseases of the rectum, treat the subject more fully; though, as I own but one little treatise on the subject, I am not prepared to say how much importance authors give it.

The general impression seems to be that rectal fissure and ulcer is so simple a matter, and the cure so easily affected (which is really true) that we fail to recognize how it wears out the patient's health and strength in a remarkable manner. The constant pain and irritation to the nervous system are more than most persons can endure.

Most of the eight cases I am about to report were non-residents of Norfolk. Two came to me so ill, and suffering such intense pain, that they felt quite sure they had cancer of the uterus, when in reality they had only a small ulcer of the rectum. The husband of one of these (Mrs. C., aged forty-four, Nansemond Co.), had been informed by her family doctor that she had cancer of the cervix. I found only a simple erosion of cervix. Both left "The Retreat" entirely relieved of all rectal pains, and are now in excellent health, one having gained over twenty pounds in weight.

A third case, Miss W., aged twenty-four, through delicacy of feeling, had for over three years concealed her "uterine disease" from her attending physician.

A careful examination of uterus twice (second time under chloroform), satisfied me that the uterus and appendages were normal. On digital examination of the rectum, I at once outlined two polypi—one an inch long, the other not quite so long; then with a speculum I discovered, dorsally, a club-shaped fissure or ulcer, with its apex extending up to the attachment of the longest polypus, which dangled and fitted perfectly in the fissure when the sphincter was closed. This fissure, like most of the others, had a grayish-colored floor, with well-defined hard edges. The young lady had many anomalous symptoms, such as pain and numbness radiating down the leg to her feet; retention of urine; almost constant pain in the back and loins, extending from the time of one defecation to the next. For weeks she had been postponing her bowel actions as long as possible, on account of the intense agony she always experienced when the desiccated and hardened feces passed over this fissure. Her relatives felt sure she was a hopeless invalid. Her mother came with her to "The Retreat," and when I assured her there was nothing like paralysis, as her doctor had suggested, and I felt quite confident that her daughter could be entirely relieved, she was very skeptical. She left in two weeks entirely cured, and now weighs over 140 pounds; is in perfect health.

The next case was a gentleman, a Methodist minister, who had been a great sufferer for ten years. He stated he had "blind piles," and that over a dozen doctors had treated him. A close examination of his rectum (the first in ten years), revealed a very insignificant but deep crack situated at the anal orifice over the external sphincter, and involving the skin. I also discovered a small, three quarter inch polypus high up, which gave no pain, though I snipped it off. This patient described his suffering upon defecation as agonizing.

It is very evident why such an insignificant little fissure could so prostrate him and produce such intolerable suffering. It was because of the great mobility of the external sphincter, and because the rectum and anus are abundantly supplied with branches from the sacral and pubic plexus of nerves. The location, therefore, and not the size of a fissure or ulcer, will determine the amount of suffering of a patient. Hence the importance of close, ocular examination of the anus, and never be content to accept his "blind pile" diagnosis and treat it.

My patient was for two years without an examination. I have within the past few days received a letter from this gentleman from Nansemond Co., consulting me in regard to his new wife's front passage, and in this letter he states, "My back passage is in perfect order since the operation."

The fifth case was a noted "Madam," who keeps a house of prostitution in this city. She came to be treated for uterine trouble. She said several physicians here and two in Baltimore had treated her womb. I found a retroverted uterus, chronic cystitis and spasmodic pains in micturition. I thought these sufficient to account for her haggard and wasted condition. I sent her to "The Retreat," and not for ten days after, seeing no improvement, did it occur to me that I had failed to examine the rectum. When I did examine it, I found a circular ulcer about one inch above the internal sphincter, as large as a silver quarter. I am quite sure the muscular fibers were laid bare in the ulcer. It was exceedingly irritable. I am also sure this was a syphilitic ulcer, as it made but little progress until after she was placed upon iodide of potassium and mercury. She left "The Retreat" in four

weeks, not entirely cured, but greatly relieved. She comes to my office once a week now for treatment.

As the treatment was different in this case from all the others, I will state what I did. I made application of nearly everything I could think of—nitrate of silver, carbolic acid, sugar-of-lead, etc. But repeated curettings did more to break down the well-defined, almost horny edges, than anything else I did. Instead of a twenty-five-cent size ulcer, she now has a contracted cicatricial spot, not entirely healed, but healing slowly, and she thinks she is almost well.

I might state just here, that over a month before I saw this patient, a prominent steamboat captain, who has his headquarters in Norfolk, came to consult me about a "terrible case of piles." I found no hemorrhoids, but the largest fringed margin of the anus I ever saw, and between the external and internal sphincters, an ulcer, if anything, larger than the woman's above mentioned. After informing him of his serious condition, and the long time he would probably have to remain quiet, he became alarmed and ran away from me, first to Richmond; and not being benefited there, to Dr. Kelsey, of New York. His brother-in-law told me last week he had spent \$1,500, and while greatly benefited and now at home, he was not entirely relieved. I told his brother-in-law before he left me my opinion was that it was a syphilitic ulcer. Dr. Kelsey confirmed this opinion.

This was one of the eight cases of rectal ulcers.

The other two cases were fissures. One, a Baptist minister, who had a polypus dangling in the fissure. He had been treated for several years for "blind piles;" no examination had ever been made.

The eighth, and last case, was the wife of a prominent merchant of the city, who had been treated for more than two years by a homœopathic with electricity and pessaries for uterine trouble. I found no uterine disease. We had never examined the rectum. It was only necessary in this instance to gently open the anus with my thumb and index finger to see the fissure plainly. When I told her to bear down the pain was so great it would throw the anus into a state of alternate contraction and relaxation. She recognized at once, as I did, that there was her trouble.

Treatment.—There is no operation in all surgery so simple as the one for the almost certain cure of fissure. The ulcer is not so easily relieved.

If the edges of the fissure are well defined and hard, I first trim them down with scissors curved on the flat. Now, as to the incision. If it is a case of long standing, and the sides and floor of the fissure are of a grayish color, and the muscle beneath irritated and hypertrophied, nothing short of complete division of the external sphincter, and then dilatation with the thumbs, is sure to obliterate the fissure. I failed to relieve my first cases years ago, because I was too timid, and dilated only, or merely scratched through the fissure with the knife. If only a portion of the fibers of the sphincter are divided, there is danger of too rapid union before the fissure heals, and you may have your work to do over—that is, if the patient will allow you. If you fail to relieve at the first operation, they are apt to run away from you to a specialist.

Six of these eight cases were entirely cured and remained so. Not one had any incontinence of feces. Of course the incision should be made with a steady hand, and at right angles to the muscular

fibers. Such an incision will always heal (except in a tubercular patient), with a nice, narrow scar.

The next most important point is to *compel* the patient to keep the bed until the wound completely heals; for if he gets out too early, the wound may not close, or far worse, unhealthy ulceration follow, which will be much harder to cure than the fissure. I place a small piece of fine lamb's wool (not cotton), in the cut for twenty-four hours only. I confine the bowels for three or four days after the operation, when I introduce a suppository of a grain of aqueous extract of opium well up in the rectum, to relieve the throbbing.

My only excuse for reading this little imperfect paper before you, gentlemen, is the hope that it may cause us to examine the rectum oftener and more carefully in the future, and not be content with the diagnosis of the patient, who comes with the statement that he has blind piles and wishes a prescription, as several of these eight told me, and had been telling other doctors for years.

If I learned nothing else from Bantock, of London, and Martin, of Berlin, they showed me the importance of examining the rectum more frequently and systematically than I had ever done before.—Lankford, *Va. Med. Monthly*.

ABARTICULAR RHEUMATISM.—In the *Practitioner*, Sir Dyce Duckworth describes a case that illustrates the dangerous character of rheumatism when it invades structures other than articular. At the knees and elbows nodules were felt, which were found to consist of inflamed ligamentous tissue. Dilatation, fatty degeneration and mitral vegetations, with pericarditis, were the cardiac complications of which the child died. Dr. Duckworth says:

"The point of chief interest in this case is the occurrence of grave cardiac disease associated with subcutaneous nodules, and the absence of ordinary articular rheumatic manifestations.

"A sufficient number of cases of this kind has now been carefully observed to render it quite certain that the several phenomena are distinctly of rheumatic nature. They illustrate the important fact that rheumatism is a disorder of wide range, and not merely a disease of joints. A study of the abarticular phases of rheumatism is absolutely necessary in order to form a true conception of the nature of the malady. The connection between subcutaneous nodules and valvular heart disease was well illustrated in this, as it is in all other like cases of the kind, and this strange conjunction is a very important fact now added to the certainties of clinical medicine; so that, given the presence of such nodules, a careful examination of the heart is incumbent on the medical attendant.

"The underlying element common to the nodules, the pericarditis, and the endocarditis, is unquestionably true rheumatism. The process is proved to be the same in both instances, histologically and clinically. The occurrence of nodules in the integuments at once suggests a similar proliferative inflammatory exudation on the cardiac valves, or in the pericardial sac, or in both structures. The same occurrence may be met with in adults as well as in children, and the presence of nodules may prove sometimes the keynote of a class of cases, very obscure and difficult of diagnosis, where pyrexia persists with few, or ill-marked, articular symptoms, and is found ultimately to depend on a rheumatic dyscrasia, which, after irreparably damaging the myocardium as well as the endocardium, prove fatal.

"The treatment of such cases is that proper for rheumatism generally. Sodium salicylate is hardly available, there being no great pain or pyrexia. Of more use are quinine, strychnine, potassium iodide, and alkalies. Arsenic is of especial value in combating the non-articular forms of rheumatic dyscrasia, and should be used persistently for weeks in cases of this kind.

"Unfortunately, the outlook is not good. The general level of nutrition is low, and the heart is apt to fail, responding but little to careful medication, suitable diet, and rest. As in the case of gout, so here, it may be affirmed in the language of a sagacious French physician—modified in respect of rheumatism—'articular rheumatism is that from which one is ill; internal rheumatism is that from which one dies,' or, put in the words employed by Musgrave nearly two centuries ago, 'arthritis raro occidit regularis, raro nisi prius degenerans in anomalam.'"

DR. VINCENT HARRIS ON THE ANTISEPTIC TREATMENT OF PHTHISIS.—Since the discovery of the tubercle bacillus, the attention of physicians has been directed especially to the treatment of phthisis by antiseptics, as promising theoretically the most hopeful means of combating the ravages of this fatal disease. At the City of London Hospital for Diseases of the Chest, Victoria Park, Dr. Vincent Harris has employed antiseptics largely in the treatment of phthisis, and in a pamphlet now before us he gives the results of his observations. The method usually adopted by Dr. Harris is by instillation, which, short of inoculation, he regards as the most deserving of prolonged trial.

The instillations consist of a number of volatile antiseptic substances, which, by being placed upon the sponge of a simple naso-oral respirator, are inhaled, and by diffusion are believed to pass freely into the ultimate air-passages of the patient who use them. The respirators are worn for stated periods several times a day.

For the instillations Dr. Harris has used sulphurous acid, carbolic acid, creasote, eucalyptus, iodine, ol. pini sylvestris, thymol, sanitas, and many other substances, but he has had the best results with the following formula, which is the one he now almost invariably uses. It is also much used by his colleagues at the Chest Hospital:

Instillatio Iodoformi Co.—V. P. H.

R.—Ol. eucalypti.....	10 c.cm.
Chloroformi.....	2 c.cm.
Spiritus rectif.....	10 c.cm.
Iodoformi.....	1 gm.

5j to be placed on the sponge of the respirator and instilled at least three times a day.

Dr. Harris' experience coincides with that of others who assert that the exhibition of medicines by the mouth, except for the mere purpose of treating symptoms, is seldom of much value in arresting the progress of the tubercular process in the lung. He thinks, however, that cod-liver oil, maltine, and preparations of iron ought to be excepted from this category, but these remedies cannot be said to attack the bacilli in the open. The cause of this want of success which besets the administration of medicines by the mouth is no doubt due to the fact that the drugs are not absorbed in amount to effect a change in the tissues sufficient to prevent the growth of the bacilli therein, or to neutralize and render harmless the products arising from the life of the micro-organisms.

The introduction of remedies by the rectum has met with no greater, and even less, success than has attended the more usual oral method.

The treatment by inhalation of hot air, which was suggested five years ago in Germany, was based upon the knowledge that in cultures an amount of heat slightly above the normal temperature of the body kills the bacillus tuberculosis. It was assumed, therefore, that if air could be introduced into the lungs at a temperature sufficiently high, it would kill or put a stop to the growth of the bacilli. For this purpose, namely, the introduction of hot air into the lungs, various apparatus were designed, and the treatment was warmly advocated, notably by Weigert, Mosso, Rondelli, and others. The method passed through the usual stages; it was at first highly lauded, then as strongly condemned, and has now almost fallen into oblivion.

In his pamphlet Dr. Harris tabulates the results obtained in fifty additional cases treated by antiseptic instillations. (An account of 100 previous cases have been before recorded.) Of these 33 increased in weight, some very markedly; 6 remained of the same weight as on admission; 2 decreased in weight, and 3 died. Of the latter, 1 died of morbus cordis, and 1 was under treatment for two weeks only. As to the 33 cases in whom an increase of weight is noted, namely, in 75 per cent. of the total, 1 increased nineteen pounds in nine weeks; 1 eighteen pounds in six weeks; 1 fourteen pounds in five weeks; 2 increased twelve pounds; 1 ten pounds; 2 nine pounds; 1 eight pounds; 5 seven pounds, and so on. Nor was increase in weight the only improvement noted; diminution of cough and sputum, diminution of night-sweats, and improved sleep at night. Of course, here again it is possible that the whole of the good effects might be traceable solely to the hospital regime, but this supposition is in Dr. Harris' opinion not very likely. A considerable number of patients expressed their belief that the instillation method considerably relieves cough and expectoration, and increases the amount of sleep they are able to obtain.

As to the question, whether the method diminishes the number of tubercle bacilli in the sputum or not, Dr. Harris says this question cannot be answered definitely until some apparatus is devised for counting the bacilli in microscopic specimens; it would also be necessary to supplement such a method by collecting the sputum for twenty-four hours, and devising a means of disseminating the bacilli equally in the whole mass. In no case, observed by him, in which the bacilli were numerous, were they found to disappear.

In spite of the general belief in the uselessness of the administration of drugs by the mouth in the curative treatment of phthisis, the following substances have been employed by Dr. Harris in certain cases: Helinine, tar, corrosive sublimate, periodate crystals, and benzoyl guaiacol or benzosol. Helinine was administered in the form of pills made with confection of roses. In the cases in which it was tried, the dose given was, it would seem, too small (6 grains per diem, instead of 15 grains), and the want of good effect following its administration may have been due to that cause. It is interesting to note, however, that helinine is the active principle of inula helenium or elecampane, preparations of which were in former days considered to be beneficial in cases of consumption, especially by French doctors.

Tar was employed by Dr. Harris in a considerable number of cases in the form of syrupus picis liquidæ, made according to the United States Pharmacopœia.

It appears in many cases to have had two markedly good effects—it diminished cough and improved the digestion. It also acted very beneficially in cases of bronchitis.

With regard to corrosive sublimate, Dr. Harris says he had to discontinue it before any curative effect could have been manifested, as it appeared altogether to upset the digestion.

Of periodate crystals, Dr. Harris and his colleagues made a considerable trial. They were led to do so from Dr. Klein's report that it was a very powerful disinfectant. It is only slightly soluble in water, 1 ounce of water taking up about 1 grain of the substance on heating. First of all, it was given in the form of powder (5 grains t. d. s.), with lemonade made with the water in which the periodate had been heated. Later it was given in the form of a temporary emulsion, made by shaking up the aqueous solution with cod-liver oil, in proportion of 3ij of the latter to 3j of the former.

It is believed to be speedily absorbed when taken into the stomach, and if absorbed as such, it should be carried by the blood to the tuberculous districts, and destroy the micro-organisms which set up the mischief. In the hands of Dr. Harris and his colleagues the periodate treatment was not so distinctly successful as, judging from its powerful disinfectant properties, they had hoped it might be.

With regard to benzozol the results of its use were of a negative character up to the time covered by Dr. Harris' paper. Further trials were, however, being made of this and other remedies, and doubtless the results will be communicated to the profession in due time.—*Hospital Gazette*.

Medical News and Miscellany

ARTICLES FOUND IN A PHYSICIAN'S SATCHEL.

Two uvula scissors, a tonsilotome,
A bit of caustic, and a small hyoid bone;
An oral saw, two mops, a reel of cotton,
A headband, whose age has been forgotten;
A double trachea tube, a harelip pin,
A bottle containing a wee drop of gin.
One Bosworth inhaler and two Sass' sprays,
A tract telling sinners to mend their bad ways;
A set of false teeth put there by the sly,
A lady's pink garter (I cannot tell why),
A mouthgag, some needles, a new pair of tongs,
An unpaid bill, which to Miss J— belongs;
A test tube of urine, recently boiled,
A Jarvis' snare that has never been soiled.
A thesis on coughs from away in strange lands,
A pot of goose grease for chaps on the hands,
Some probangs, a douche, seven pills for the sick,
A small throat mirror, a broken tooth-pick;
A bundle of cotton, an old book on whist,
Were found in the grip of a laryngologist.

—William T. Cathell, M.D.

THE Chicago College of Physicians graduated a class of 42.

FIFTY-TWO youths graduated from the Detroit College of Medicine, March 22.

RUSH MEDICAL COLLEGE, of Chicago, graduated 142 young men on Tuesday, March 29.

THE Norristown Hospital is to have the State's largest private refrigerator—37x14x20 feet.

THE women doctors of Illinois propose to exhibit an emergency hospital at the World's Fair.

HAS any of our esteemed contemporaries received any cash from the Gum Elastic Conscience Co., of N. Y.?

DR. WILLIAM HAGGERTY's barn, Scranton, Pa., including two horses, was badly damaged by fire. Loss, \$6,000.

AN unsuccessful attempt was made to burn the stable of Dr. J. C. Gilbert, Main street and Springfield avenue, Chestnut Hill.

DR. A. B. RICHARDSON has left the editorial corps of the *Lancet Clinic* to assume the superintendency of the insane asylum at Columbus.

THE Board of Managers of the Episcopal Hospital elected Drs. Francis Bennett, Walter R. Lincoln and H. H. Doan, resident physicians.

DR. W. W. KEEN removed the larynx from a man suffering from laryngeal cancer, last week. Drs. J. Solis Cohen, Horwitz, Jones and Thorington assisted.

THE April (1892) number of *The Alienist and Neurologist*, contains "Surgical Cure of Mental Maladies"—Résumé, by Dr. Guiseppe Seppilli, Italy; "Some Principles Involved in the Nature and Treatment of Inebriety," by T. L. Wright, M.D., Bellefontaine, Ohio; "Art in the Insane," by J. G. Kiernan, M.D., Chicago, Ill.; "Drug Habituation," by Lucius W. Baker, M.D., Baldwinville, Mass.; "Tumor of the Cerebellum," by George J. Preston, M.D., Baltimore; "The Epidemic Inflammatory Neurosis; or Neurotic Influenza," by C. H. Hughes, M.D., St. Louis; "Pessimism in its Relation to Suicide," by Wm. W. Ireland, M.D., Scotland; "Classification of Insanity," by C. G. Chaddock, Traverse City, Mich.; "Report of a Case of Transitory Frenzy," by Theo. Diller, M.D., Pittsburg; "Intermittent Paralysis," by L. Breme, M.D., St. Louis. Besides the usual selections, editorials, hospital notes, reviews, etc. C. H. Hughes, M.D., Editor, 500 N. Jefferson Ave., St. Louis. Subscription, \$5.00 per annum; single copies, \$1.50.

WEEKLY Report of Interments in Philadelphia, from March 26 to April 2, 1892:

CAUSES OF DEATH.		CAUSES OF DEATH.	
	Adults.		Adults.
Abscess.....	1	Inflammation, bronchi.....	6
Apoplexy.....	15	" kidneys.....	5
Asthma.....	1	" liver.....	1
Anemia.....	1	" lungs.....	33
Bright's disease.....	17	" pericardium.....	1
Cancer.....	7	" peritoneum.....	2
Casualties.....	5	" pleura.....	1
Cerebro-spinal meningitis.....	1	" s. & bowels.....	3
Congestion of the brain.....	2	" spine.....	1
" lungs.....	3	Jaundice.....	1
Cholera infantum.....	2	Lithotomy.....	1
Cirrhosis of the liver.....	3	Malformation.....	1
Consumption of the lungs.....	44	Marasmus.....	12
" bowels.....	5	Measles.....	1
Convulsions.....	16	Neuralgia of the heart.....	3
Croup.....	10	Obstruction of the bowels.....	2
Cyanosis.....	2	Old age.....	24
Debility.....	3	Paralysis.....	11
Diarrhoea.....	2	Rheumatism.....	1
Diphtheria.....	14	Sclerosis, spinal.....	1
Disease of the brain.....	28	Scrofula.....	1
Drowned.....	1	Septicemia.....	2
Dropsy of the brain.....	1	Softening of the brain.....	4
Erysipelas.....	1	Shock, surgical.....	1
Enlargement of the heart.....	1	Suicide.....	2
Fever, scarlet.....	14	Sunstroke.....	2
" typhoid.....	5	Teething.....	3
" urethral.....	1	Tetanus.....	2
Homicide.....	1	Tumor.....	2
Inanition.....	1	Ulceration of the stomach.....	1
Influenza.....	1	Uræmia.....	3
Inflammation, bladder.....	1	Whooping cough.....	3
" brain.....	5	Total.....	258

THE Northwestern University Women's Medical School, of Chicago, graduated a class of 109, March 28.

THE State's new \$400,000 asylum for the insane at Wernersville will be only two stories high and will have no hospital, as it is intended for chronic patients only.

THE LATEST.—The Iowa *Medical and Surgical Reporter*; monthly; \$2.00 per annum. John W. Overton, M.D., editor and proprietor, Des Moines, Iowa.

THIRTY THREE graduates received the degree of M.D. from the Michigan College of Medicine and Surgery, March 15. The Hippocratic oath was administered.

DR. GEORGE TOMLINSON, eighty years old, of Shiloh, N. J., died recently. The diseased practised until a few weeks ago, and for fifty years was a deacon in the Baptist church.

THE residence of the late Dr. Agnew at Sixteenth and Walnut streets, has been purchased by Dr. De-Forrest Willard, for \$80,000. Dr. Agnew paid Dr. Levis \$65,000 for the property a few years ago.

A YOUNG Mexican woman, who has gone into the faith cure business, is called a saint by the Mexicans and Indians of Guaymas. All the medical saints thus far have been of the non-professional class.

DR. HUTCHINSON has gone to the West Indies to arouse an interest among the medical men there in the Pan-American Medical Congress. He will succeed in this, as in all his other undertakings.

MEMBERS of the Mississippi Valley Medical Association wishing to go as delegates to the American Medical Association at Detroit, will please send names to Dr. E. S. McKee, Secretary, 57 W. Seventh street, Cincinnati.

Two wholesale druggists, in Philadelphia, were arrested for selling laudanum that was below the official strength. The State Pharmaceutical Society is the moving spirit in the matter, and Dr. Henry Leffmann the analyst.

DR. E. L. B. GODFREY, of Camden, has been appointed Chairman of the Committee of Arrangements of the New Jersey Medical Society, which will hold its annual meeting at Atlantic City, on the third Tuesday in June.

AN unheard-of offense brought Ernest Taffer, of New York, a lad of seventeen, into the policemen's hands. Three Italian women, of Mott street, charged him with coming to their tenement and, declaring that he was a doctor of the Board of Health, compelled them to submit to a physical examination.

It pays to be a popular physician in Europe, almost as well as it does in America. Dr. Metzger, of Wiesbaden, it is said, received about \$400 a day during his attendance upon the Czarina of Russia. In addition to this the Czar conferred upon him the decoration of the Stanislas order, set in diamonds.

THE Virginia courts have decided in the case of the notorious "Dr" Flower, that as he has no residence in the State, he is not compelled to obtain a certificate for registration from the State Examining Board. This renders the law ridiculous; as it subjects the physician who desires to practice regularly to a regulation from which the traveling quack is relieved.

A WITNESS in a London court characterized a physician who had been acting for another as merely a "local demon." The judge suggested that he meant "locum tenens," but the witness stuck to his own version of the phrase throughout his testimony. He may have had private information not accessible to the court.

THE sixtieth anniversary of the Wills Eye Hospital was celebrated by the first donation day it has ever had during its existence of three-score years. The hospital, which is the only one of its kind in the State, is doing an incalculable amount of good among the poor and lowly, for whom it was intended. During 1891, 12,280 patients were treated, an increase of 1,177 over 1890; 668 patients were admitted to the wards for special treatment, as compared with 480 during the previous year; the total number of operations during 1891 being 2,763, an increase of 2,000 over 1890.

THE title of Doctor used to have a significance; but judging by the following items it will soon be necessary to adopt the German fashion, and speak of "Medical Doctor," when a physician is designated:

The celebrated editor, Dr. Munford, is dead.

The Passion Service, the composition of Dr. A. Gaul, was performed at the Church of the Saviour.

Dr. Wekerle, Hungarian Minister of Finance, in the Lower House of the Hungarian Diet, said that owing to the present state of European affairs a reduction in the outlay for the army was impossible.

On motion of Senator Hoar, Dr. Joseph Francis was admitted to the floor of the Senate to speak on the Indian Appropriation bill.

Or, are these to be considered evidences of the versatile talents of our colleagues; and of the stress that compels so many of them to seek other occupations than that of attending the sick?

MONTHLY BULLETIN OF THE NEW YORK STATE BOARD OF HEALTH.—The 10,755 deaths reported during February represent a daily mortality of 371, against 434 in January and 362 in December. In February, 1891, there were 8,704, or about 300 deaths daily; at that time there was a mild prevalence of influenza, the epidemic of which culminated in April. The present epidemic, commencing in December, attained its height in January, when it was estimated to have caused nearly 4,000 deaths. The mortality from this cause in February may be estimated at 2,000. The increase over the mortality of February, 1891, is altogether in local diseases, the number of deaths from zymotic diseases being the same in the two months; there were 600 more deaths from acute respiratory diseases, 200 more from consumption and nervous diseases, and 250 more from old age. Compared with January, there is no material change in the number of deaths from zymotic diseases, but a decrease in that from the causes last mentioned. Diphtheria caused 100 more deaths than a year ago, and 100 less than in January. Scarlet fever shows about the same increase over a year ago, and no change from January. Typhoid fever, measles and whooping-cough caused fewer deaths. Typhus fever caused 8 deaths in New York; no new point of development since last month has been reported. Of 7 deaths from small-pox, 6 occurred in New York and 1 in the hospital for contagious diseases at Flatbush; 1 case each developed during March in White Plains and Syracuse, the probable origin of each being New York or Brooklyn. Newburgh reported, too late for the January bulletin, 75 deaths from all causes, 1 being from scarlet fever, three diphtheria, nine consumption, and thirty pneumonia.

A NATIONAL SANITARIUM FOR CONSUMPTIVES.
—Senator Gallinger, of New Hampshire, who is a physician of high repute, has introduced in the United States Senate a bill proposing that Congress appoint a commission to locate a tract of government land as the site for a sanitarium for consumptives, the construction and management of which to be intrusted to private enterprise.

He points out that in New England pulmonary diseases cause 25 per cent. of all deaths, while in New Mexico they cause but 3 per cent. of all deaths, even this small proportion being presumably largely made up of invalids from the North. This being the case, he argues that a sanitarium for victims of this class of diseases, established on government land, say in New Mexico, would promise highly beneficial results.

We congratulate Dr. Gallinger (we call him by the nobler of his two titles), upon a proposition so worthy of his humane profession, but it seems to us that his bill should be amended by providing that the United States government, which is to furnish the location, should also establish and carry on the sanitarium itself. Such an institution as this, especially, ought not to be surrendered to a profit seeking corporation or to individuals to be run as a gainful speculation.

There is nothing in this suggestion that need startle anybody. The erection and management of hospitals is one of the most universally recognized and exercised of public functions, and the medical department of our government is already organized in a manner that would enable it to take hold right away of the proposed sanitarium and manage it.

We have a further suggestion to make, namely, that at the sanitarium treatment and maintenance be invariably free. We would not have a department for patients who could pay and another for non-paying patients, because that principle, wherever applied, and we regret to say that it is generally applied in public hospitals, results in neglect and humiliation for the non-paying class, and a concentration of attention upon those who pay. If the rich sick are too proud to accept the gratuitous service of the government, let them go elsewhere, as they can afford to. Let not the poor, who cannot go elsewhere, be placed in a humiliating situation to save the pride of the well-to-do.

If it were thought best, the expense of the sanitarium could be assessed upon the several States in proportion to the number of patients from them respectively, who received treatment. This would, indeed, be no more than fair to the Southern States, which would furnish few cases. We believe that a free national sanitarium for pulmonary patients, established and conducted on these lines, would be an institution of the purest and most extensive beneficence.

The rich or the well-to-do can and already do make a practice of sending their stricken ones to Europe, or the South or West, but families which are able to maintain sick persons in distant places, with expense for treatments, attendance and maintenance in comfort, are an exceedingly small proportion of the population. The pecuniary circumstances of nearly all pulmonary patients are such that change of climate for them is out of the question. They must die where they are stricken. But were there a free national sanitarium provided, with only the expense of reaching it to be paid, it is probable that but few sufferers would be found so penniless or so without friends that they would not be able to visit it.

Will the Senator-doctor adopt our amendments to his bill?—*The New Nation.*

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending April 2, 1892.

LEWIS, D. O., Surgeon. From Naval Hospital, Washington, and to Naval Hospital, Mare Island, Cal.

BERRYHILL, T. A., Passed Assistant-Surgeon. From the U. S. S. "Pensacola," and to the U. S. S. "Ranger."

FARWELL, W. G., Surgeon. Granted leave of absence for six months, with permission to leave United States.

WOODS, GEO. W., Medical Inspector. From the U. S. S. "Pensacola," and to the Hospital at Mare Island, Cal.

BATES, N. L., Medical Director. Detached from Naval Hospital, Mare Island, Cal., and ordered home.

APPOINTMENT.

BARNUM, MERRITT W. Commissioned an Assistant-Surgeon in the Navy, from March 15, 1892.

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